

## 5. ECONOMIC STATUS OF HMS FISHERIES

Development of each rule, and of Atlantic HMS fisheries as a whole, is facilitated when there is an economic baseline against which the rule or fishery may be evaluated. In this analysis, NMFS used the past ten years of data to facilitate the analysis of trends. It also should be noted that all dollar figures are reported in nominal dollars (i.e., current dollars). If analysis of real dollar (i.e., constant dollar) trends controlled for inflation is desired, price indexes for 2006 to 2013 are provided in Table 5.1. To determine the real price in base year dollars, divide the base year price index by the current year price index, and then multiply the result by the price that is being adjusted for inflation.

**Table 5.1 Inflation Price Indexes**

Year	CPI-U	GDP Deflator	PPI Unprocessed Finfish
2006	201.6	94.8	334.6
2007	207.3	97.3	318.1
2008	215.3	99.2	301.6
2009	214.5	100.0	306.9
2010	218.1	101.2	381.5
2011	224.9	103.3	388.1
2012	229.6	105.2	367.4
2013	233.0	106.7	438.2

Note: The CPI-U is the standard Consumer Price Index for all urban consumers (1982-1984=100) produced by U.S. Department of Labor Bureau of Labor Statistics. The source of the Producer Price Index (PPI) for unprocessed finfish (1982=100) is also the Bureau of Labor Statistics. The Gross Domestic Product (GDP) Implicit Price Deflator (2009=100) is produced by the U.S. Department of Commerce Bureau of Economic Analysis.

### 5.1 Commercial Fisheries

All of the information and data presented in this section were obtained from NMFS 2014. In 2013, 9.9 billion pounds valued at \$5.5 billion were landed for all fish species by U.S. fisherman at U.S. ports. In 2012, 9.6 billion pounds valued at \$5.1 billion were landed for all fish species by U.S. fisherman at U.S. ports. The overall value of landings between 2012 and 2013 increased by 7.6 percent. The total value of commercial HMS landings in 2013 was \$45.2 million (Table 5.3).

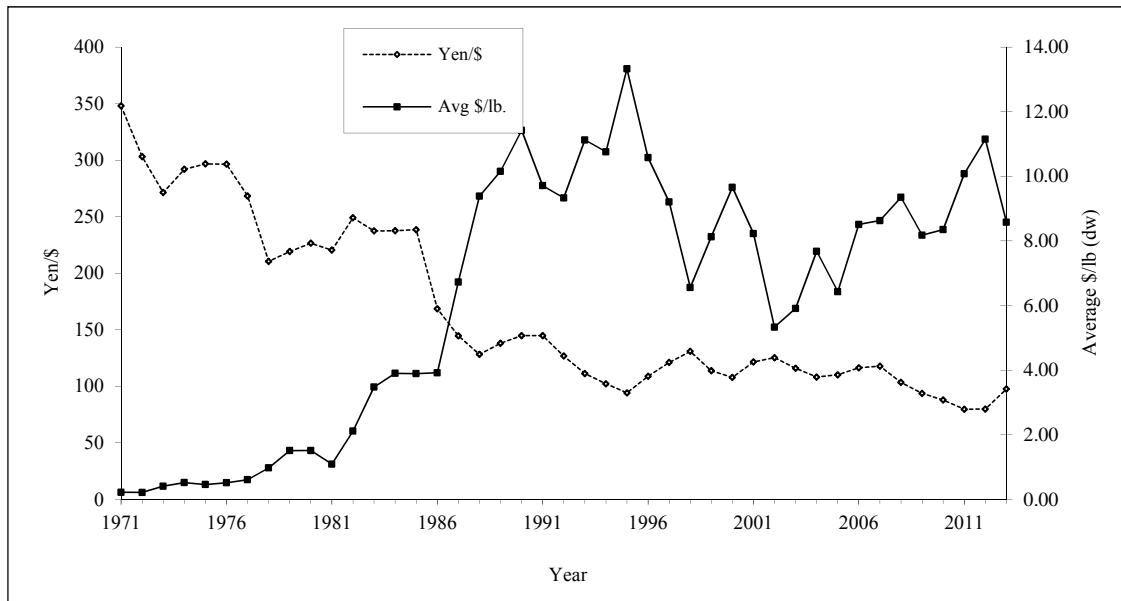
The estimated value of the 2013 domestic production of all fishery products was \$10.8 billion. This is essentially unchanged from the estimated value in 2012. The total import value of fishery products was \$33.2 billion in 2013. This is an increase of \$2.1 billion from 2012. The total export value of fishery products was \$29.1 billion in 2013. This is an increase of \$1.7 billion from 2012.

#### 5.1.1 Ex-Vessel Prices

The average ex-vessel prices per pound dressed weight (dw) for 2006 to 2013 by species and area are summarized in Table 5.2. Prices are reported in nominal dollars. The ex-vessel

price depends on a number of factors including the quality of the fish (e.g., freshness, fat content, method of storage), the weight of the fish, the supply of fish, and consumer demand.

Average ex-vessel prices for bluefin tuna have declined 23 percent since 2012. The ex-vessel prices for bluefin tuna can be influenced by many factors, including market supply and the Japanese Yen/U.S. Dollar (¥/\$) exchange rate. Figure 5.1 shows the average ¥/\$ exchange rate, plotted with average ex-vessel bluefin tuna prices, from 1971 to 2013.



**Figure 5.1 Average Annual Yen/\$ Exchange Rate and Average U.S. Bluefin Tuna Ex-vessel \$/lb (dw) for All Gears (1971-2013)**

Source: Federal Reserve Bank ([research.stlouisfed.org](http://research.stlouisfed.org)) and NMFS Northeast HMS Branch.

**Table 5.2 Average Ex-vessel Prices per Pound for Atlantic HMS, by Area (2006-2013)**

Species	Area	2006	2007	2008	2009	2010	2011	2012	2013
Bigeye tuna	Gulf of Mexico	\$5.73	\$5.66	\$6.12	\$5.80	\$5.79	\$5.64	\$6.19	\$3.36
	S. Atlantic	3.94	4.34	4.34	4.11	4.03	4.73	4.75	5.15
	Mid-Atlantic	4.96	5.48	5.70	5.42	5.86	6.38	6.90	6.30
	N. Atlantic	4.54	5.31	5.60	5.18	4.79	5.39	5.67	5.50
Bluefin tuna	Gulf of Mexico	4.78	5.63	4.51	4.65	5.42	6.38	7.16	6.72
	S. Atlantic	10.42	11.16	13.29	14.43	8.75	7.34	8.20	7.52
	Mid-Atlantic	7.92	6.95	7.94	10.10	8.94	10.64	10.95	9.02
	N. Atlantic	7.68	8.31	8.31	7.06	8.38	10.21	11.57	8.60
Yellowfin tuna	Gulf of Mexico	2.89	3.02	3.51	3.04	3.72	3.65	3.51	3.66
	S. Atlantic	2.32	2.69	2.99	2.90	3.53	3.93	4.63	3.64
	Mid-Atlantic	2.39	2.99	3.30	2.50	3.43	3.45	4.46	4.73
	N. Atlantic	2.63	3.17	3.82	2.86	2.80	3.39	4.22	3.98
Albacore tuna	Gulf of Mexico	0.62	0.53	0.49	0.55	1.40	1.09	0.68	0.82
	S. Atlantic	0.93	1.24	1.21	1.29	1.36	1.42	1.64	2.07
	Mid-Atlantic	0.82	0.86	0.97	1.10	1.30	1.19	1.25	1.42
	N. Atlantic	0.98	1.37	2.00	1.26	1.56	1.55	1.34	1.92
Skipjack tuna	Gulf of Mexico	-	-	-	0.50	-	0.90	0.75	-
	S. Atlantic	0.74	0.73	0.95	0.95	1.13	1.25	1.10	0.80
	Mid-Atlantic	0.79	2.22	4.50	-	-	0.60	1.06	0.87
	N. Atlantic	-	-	-	-	-	-	-	0.93
Swordfish	Gulf of Mexico	2.90	3.07	2.93	2.69	3.53	4.15	3.42	3.53
	S. Atlantic	3.86	4.24	4.11	4.12	4.63	4.84	4.97	5.00
	Mid-Atlantic	3.52	4.07	3.50	3.40	4.43	4.44	4.51	4.49
	N. Atlantic	3.65	4.11	4.20	3.49	4.61	4.22	4.49	4.63
Large coastal sharks	Gulf of Mexico	0.75	0.42	0.67	0.52	0.48	0.38	0.40	0.46
	S. Atlantic	0.47	0.54	0.72	0.55	0.65	0.61	0.75	0.77
	Mid-Atlantic	0.28	0.56	0.71	0.57	0.64	0.54	0.67	0.65
	N. Atlantic	-	-	-	-	-	-	-	-
Pelagic sharks	Gulf of Mexico	1.21	1.29	1.18	1.25	1.47	1.54	1.33	1.53
	S. Atlantic	1.23	1.29	1.29	1.25	1.27	1.46	1.74	1.66
	Mid-Atlantic	1.15	1.06	1.20	1.16	1.19	1.30	1.39	1.72
	N. Atlantic	0.73	0.85	0.96	1.23	1.28	1.48	1.68	1.97
Small coastal sharks	Gulf of Mexico	0.51	0.58	0.62	0.69	0.55	0.58	0.66	0.33
	S. Atlantic	0.68	0.80	0.78	0.71	0.79	0.81	0.99	0.72
	Mid-Atlantic	0.45	0.43	0.48	0.57	0.57	0.59	0.68	0.83
	N. Atlantic	-	-	-	-	-	-	-	-
Shark fins	Gulf of Mexico	16.40	13.22	14.94	15.09	16.48	15.11	14.97	11.06
	S. Atlantic	13.24	11.44	12.73	13.15	15.35	14.91	11.00	6.02
	Mid-Atlantic	9.82	6.12	3.74	3.62	6.83	3.50	2.79	1.45
	N. Atlantic	6.23	3.24	3.00	3.67	2.40	1.60	1.86	1.85

Sources: HMS eDealer, Dealer weighout slips from the Southeast Fisheries Science Center (SEFSC), Northeast Fisheries Science Center (NEFSC), and bluefin tuna dealer reports from the Northeast Regional Office. Gulf of Mexico includes: TX, LA, MS, AL, and the west coast of FL. S. Atlantic includes: east coast of FL. GA, SC, and NC dealers reporting to SEFSC. Mid-Atlantic includes: NC dealers reporting to NEFSC, VA, MD, DE, NJ, NY, and CT. N. Atlantic includes: RI, MA, NH, and ME. For bluefin tuna, all NC landings are included in Mid-Atlantic.

### 5.1.2 Revenues

Table 5.3 summarizes the average annual revenues of the Atlantic HMS fisheries based on average ex-vessel prices. Data for Atlantic HMS landings weight is as reported per eDealer in 2013, the U.S. National Report (NMFS, 2013a), the information used in the shark stock assessments, information given to ICCAT (Cortés pers. comm., 2013), as well as price and weight reported to the NMFS Northeast Regional Office by Atlantic bluefin tuna dealers. These values indicate that the estimated total annual revenue of Atlantic HMS fisheries has decreased in 2013 to \$45.2 million from \$64.0 million in 2012. From 2012 to 2013, the Atlantic tuna fishery's total revenue decreased by \$18.8 million. A majority of that increase can be attributed to the decrease in commercial landings of yellowfin and bluefin tuna. From 2012 to 2013, the annual revenues for the shark fisheries decreased by \$0.8 million. Finally, the annual revenues for swordfish declined by \$4.0 million from 2012 to 2013 due to a decrease in landings.

**Table 5.3 Estimates of the Total Ex-vessel Annual Revenues of Atlantic HMS Fisheries (2006-2013)**

Species		2006	2007	2008	2009	2010	2011	2012	2013
Bigeye tuna	Ex-vessel \$/lb dw	\$4.80	\$5.20	\$5.26	\$5.09	\$5.22	\$5.77	\$6.42	\$5.71
	Weight lb dw	960,863	706,361	736,520	774,087	799,934	1,122,619	1,039,585	872,238
	Fishery revenue	\$4,612,142	\$3,673,077	\$3,874,095	\$3,940,103	\$4,175,655	\$6,477,512	\$6,674,136	\$4,787,072
Bluefin tuna	Ex-vessel \$/lb dw	\$8.51	\$8.63	\$9.35	\$8.18	\$8.35	\$10.08	\$11.15	\$8.58
	Weight lb dw	528,404	515,176	720,823	899,477	1,119,937	996,661	995,583	682,533
	Fishery revenue	\$4,496,718	\$4,445,969	\$6,739,695	\$7,357,722	\$9,351,474	\$10,046,343	\$11,100,750	\$5,826,566
Yellowfin tuna	Ex-vessel \$/lb dw	\$2.50	\$2.90	\$3.22	\$2.87	\$3.52	\$3.60	\$4.16	\$3.94
	Weight lb dw	3,849,095	4,521,240	2,423,498	3,159,665	2,154,728	2,676,682	4,349,482	2,594,514
	Fishery revenue	\$9,622,738	\$13,111,596	\$7,803,664	\$9,068,239	\$7,584,643	\$9,636,055	\$18,093,845	\$11,300,700
Skipjack tuna	Ex-vessel \$/lb dw	\$0.75	\$0.75	\$1.01	\$0.91	\$1.13	\$1.17	\$1.06	\$0.85
	Weight lb dw	21,693	26,455	32,628	30,688	16,269	12,931	17,804	3,857
	Fishery revenue	\$16,303	\$19,793	\$32,950	\$28,057	\$18,451	\$15,164	\$18,949	\$3,204
Albacore tuna	Ex-vessel \$/lb dw	\$0.86	\$0.97	\$1.15	\$1.11	\$1.36	\$1.29	\$1.31	\$1.70
	Weight lb dw	203,354	244,272	216,759	291,187	290,827	491,133	489,800	420,537
	Fishery revenue	\$175,198	\$237,681	\$248,400	\$324,439	\$394,754	\$632,450	\$639,370	\$613,893
Total tuna	Fishery revenue	\$18,923,099	\$21,488,116	\$18,698,804	\$20,718,559	\$21,524,977	\$26,807,524	\$36,527,050	\$22,531,435
Swordfish	Ex-vessel \$/lb dw	\$3.54	\$3.99	\$3.68	\$3.46	\$4.40	\$4.50	\$4.41	\$4.68
	Weight lb dw	3,002,597	3,643,926	3,414,513	3,762,280	3,676,324	4,473,140	5,561,605	4,366,578
	Fishery revenue	\$10,639,324	\$14,544,604	\$12,577,768	\$13,031,079	\$16,186,878	\$20,130,595	\$24,534,334	\$20,535,723
Large coastal sharks	Ex-vessel \$/lb dw	\$0.62	\$0.48	\$0.70	\$0.54	\$0.60	\$0.53	\$0.59	\$0.64
	Weight lb dw	3,808,662	2,329,272	1,451,423	1,532,969	1,566,741	1,469,142	1,445,597	1,409,433
	Fishery revenue	\$2,363,068	\$1,122,051	\$1,009,138	\$828,003	\$938,044	\$779,993	\$854,916	\$695,722
Pelagic sharks	Ex-vessel \$/lb dw	\$1.17	\$1.12	\$1.21	\$1.18	\$1.23	\$1.35	\$1.43	\$1.68
	Weight lb dw	192,843	262,179	234,546	225,575	312,195	314,314	314,084	257,774
	Fishery revenue	\$224,911	\$294,036	\$284,113	\$266,548	\$382,527	\$425,831	\$449,759	\$400,341
Small coastal sharks	Ex-vessel \$/lb dw	\$0.61	\$0.70	\$0.69	\$0.69	\$0.69	\$0.75	\$0.87	\$0.55
	Weight lb dw	763,327	618,191	639,842	708,279	397,766	590,174	667,501	445,641
	Fishery revenue	\$465,586	\$432,816	\$440,108	\$488,374	\$272,590	\$441,269	\$578,126	\$280,629
Shark fins (5% of all sharks landed)	Ex-vessel \$/lb dw	\$14.80	\$11.63	\$12.43	\$12.45	\$14.02	\$11.90	\$8.96	\$6.07
	Weight lb dw	238,242	160,482	116,291	123,341	113,835	118,682	121,359	153,356*
	Fishery revenue	\$3,525,871	\$1,865,900	\$1,444,918	\$1,535,469	\$1,596,472	\$1,412,129	\$1,086,979	\$744,984
Total sharks	Fishery revenue	\$6,579,436	\$3,714,802	\$3,178,277	\$3,118,394	\$3,189,633	\$3,059,222	\$2,969,779	\$2,121,676
Total HMS	Fishery revenue	\$36,141,860	\$39,747,522	\$34,454,849	\$36,868,033	\$40,901,488	\$49,997,341	\$64,031,163	\$45,188,834

\* Shark fin total weight was based on reported shark fin landings reported to eDealer in 2013. Sources: HMS eDealer Program, NMFS Northeast Commercial Fisheries Database Service; Pelagic Dealer Compliance Program; and NMFS, 2013.

### 5.1.3 Operating Costs

NMFS has collected operating cost information from commercial permit holders via logbook reporting. Each year, 20 percent of active Atlantic HMS commercial permit holders are selected to report economic information along with their Atlantic HMS logbook or Coastal Fisheries logbook submissions. In addition, NMFS also receives voluntary submissions of the trip expense and payment section of the logbook form from non-selected vessels.

The primary expenses associated with operating an Atlantic HMS permitted PLL commercial vessel include labor, fuel, bait, ice, groceries, other gear, and light sticks on swordfish trips. Unit costs are collected on some of the primary variable inputs associated with trips. The unit costs for fuel, bait, and light sticks are reported in Table 5.4. Fuel costs increased over 59 percent from 2006 to 2013 while the cost per pound for bait remained fairly constant from 2006 to 2010 but nearly doubled between 2010 and 2011 and has remained at this new level through 2013. The unit cost per light sticks has remained fairly constant over the past few years.

**Table 5.4 Pelagic Longline Vessel Median Unit Costs for Fuel, Bait, and Light Sticks (2006–2013)**

<b>Input Unit Costs (\$)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Fuel (per gallon)	2.15	2.25	3.55	1.73	2.50	3.38	3.50	3.35
Bait (per lb)	0.85	0.85	0.81	0.81	0.85	1.55	1.58	1.55
Light sticks (per stick)	0.46	0.36	0.37	0.37	0.28	0.25	0.30	0.30

Source: Fisheries Logbook System.

Table 5.5 provides the median total cost per trip for the major variable inputs associated with Atlantic HMS trips taken by pelagic longline vessel. Fuel costs are one of the largest variable expenses. Fuel costs decreased significantly in 2013. Pelagic longline vessel fuel costs per trip decreased 18 percent from 2012 to 2013.

**Table 5.5 Median Input Costs for Pelagic Longline Vessel Trips (2006–2013)**

<b>Input Costs (\$)</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Fuel	1,728	3,012	3,600	3,000	2,480	3,445	2,963	2,436
Bait	1,115	1,200	1,500	1,875	1,731	3,671	3,600	3,284
Light sticks	728	648	600	600	493	663	750	784
Ice costs	498	540	540	625	225	726	759	440
Grocery expenses	696	786	800	1,000	752	900	900	900
Other trip costs	1,200	1,500	1,651	1,670	1,500	2,000	1,443	587

Source: Fisheries Logbook System.

Labor costs are also an important component of operating costs for HMS pelagic longline vessels. Table 5.6 lists the number of crew on a typical pelagic longline trip. The median number of crew members has been consistently three from 2006 to 2013. Most crew and captains are paid based on a lay system. According to Atlantic HMS logbook reports, owners are typically paid 50 percent of revenues. Captains receive a 25 percent share and crew in 2013 received 25 percent on average. These shares are typically paid out after costs are netted from

gross revenues. Median total shared costs per trip on pelagic longline vessels have ranged from \$5,657 to \$6,948 from 2006 to 2013.

**Table 5.6 Median Labor Inputs for Pelagic Longline Vessel Trips (2006–2013)**

Labor	2006	2007	2008	2009	2010	2011	2012	2013
Number of crew	3	3	3	4	3	3	3	3
Owner share (%)	50	47	45	45	50	50	50	50
Captain share (%)	20	20	20	20	23	20	25	25
Crew share (%)	13	15	15	30	29	29	30	25
Total shared costs (\$)	5,657	5,566	6,037	7,000	6,500	11,306	9,000	6,948

Source: Fisheries Logbook System.

In 2013, median reported total trip sales were \$14,320. In 2012, median reported total trip sales were \$20,572. After adjusting for operating costs, median net earnings per trip were \$11,517 in 2012. Median net earnings per trip decreased to \$6,187 in 2013.

It should be noted that operating costs for the Atlantic HMS commercial fleet vary considerably from vessel to vessel. The factors that impact operating costs include unit input costs, vessel size, target species, and geographic location among other things.

## **5.2 Fish Processing and Wholesale Sectors**

Consumers spent an estimated \$86.5 billion for fishery products in 2013, including \$57.9 billion at food service establishments, \$28.1 billion in retail sales for home consumption, and \$478 million for industrial fish products. The commercial marine fishing industry contributed \$43.6 billion (in value added) to the U.S. Gross National Product in 2013 (NMFS, 2014).

### **5.2.1 Dealers**

NMFS does not currently have information regarding the costs and revenues for Atlantic HMS dealers. In general, dealer costs include: purchasing fish; paying employees to process the fish; rent or mortgage; and supplies to process the fish. Some dealers may provide loans to the vessel owner, money for vessel repairs, fuel, ice, bait, etc. In general, outlays and revenues of dealers are not as variable or unpredictable as those of a vessel owner; however, dealer costs may fluctuate depending upon supply of fish, labor costs, and equipment repair.

Although NMFS does not have specifics regarding HMS dealers, there is some information on the number of employees for processors and wholesalers in the United States provided in *Fisheries of the United States* (NMFS, 2014) (<http://www.st.nmfs.noaa.gov/st1/publications.html>). Table 5.7 provides a summary of available information.

**Table 5.7 Processors and Wholesalers: Plants and Employment (2012)**

Area and State	Processing <sup>1</sup>		Wholesale <sup>2</sup>		Total	
	Plants	Employment	Plants	Employment	Plants	Employment
<b>New England</b>						
Maine	35	714	172	1,191	207	1,905
New Hampshire	10	242	11	113	21	355
Massachusetts	52	2,336	168	2,065	220	4,401
Rhode Island	11	*	39	-	50	*
Connecticut	5	*	17	193	22	193
Total	113	3,292	407	3,562	520	6,854
<b>Mid-Atlantic</b>						
New York	22	397	257	1,892	279	2,289
New Jersey	13	521	86	909	99	1,430
Pennsylvania	4	*	31	649	35	649
Delaware	1	*	6	26	7	26
District of Columbia	-	-	2	*	2	*
Maryland	17	480	51	568	68	1,048
Virginia	36	1,441	59	493	95	1,934
Total	93	2,839	492	4,537	585	7,376
<b>South Atlantic</b>						
North Carolina	28	671	59	430	87	1,101
South Carolina	2	*	24	161	26	161
Georgia	6	*	31	540	37	540
Florida	40	1,442	302	2,235	342	3,677
Total	76	2,113	416	3,366	492	5,479
<b>Gulf</b>						
Alabama	32	1,432	16	283	48	1,715
Mississippi	22	2,120	21	116	43	2,236
Louisiana	62	1,898	101	617	163	2,515
Texas	34	1,553	112	1,020	146	2,573
Total	150	7,003	250	2,036	400	9,039
<b>Inland States or Other</b>						
Areas**, Total	54	2,554	221	2,723	275	5,277

<sup>1</sup> Based on North American Industry Classification System (NAICS) 3117 as reported to the Bureau of Labor Statistics. <sup>2</sup> Based on North American Industry Classification System (NAICS) 42446 as reported to the Bureau of Labor Statistics. \*Included with Inland States. \*\*Includes Puerto Rico and U.S. Virgin Islands. Source: NMFS, 2014b.

## 5.2.2 Processing Sector

NMFS does not currently collect wholesale price information from dealers.

NMFS has information regarding the mark-up percentage paid by consumers. A mark-up or margin is the difference between the price paid for the product by the consumer and the wholesale or dockside value for an equivalent weight of the product. This information is presented in Table 5.8. Primary wholesalers and processors on average received a 77 percent margin on sales in 2013, which is lower than margins in 2012.



**Table 5.8 Summary of the Mark-Up and Consumer Expenditures for the Primary Wholesale and Processing of Domestic Commercial Marine Fishery Products**

	2011	2012	2013
Purchase of fishery inputs (\$)	9,142,981,000	8,687,636,000	9,690,909,000
Percent mark-up of fishery inputs (%)	90.3	90	77
Total mark-up (\$)	8,942,039,000	7,803,257,000	7,510,336,000
Value added as percent of total mark-up (%)	60.4	60	60
Value added within sector (\$)	5,398,531,000	4,714,590,000	4,534,951,000
Total value of sales within sector (\$)	18,085,020,000	16,490,893,000	17,201,245,000

Source: NMFS, 2014b.

### 5.3 International Trade

Several Regional Fishery Management Organizations (RFMOs), including ICCAT, have taken steps to improve the collection of international trade data in order to estimate landings related to these fisheries, and to identify potential compliance problems with certain RFMO management measures. This section describes the United States' participation in HMS related international trade programs, a review of U.S. HMS export activity, import activity, and data use.

The United States collects general trade monitoring data through the U.S. Bureau of Customs and Border Protection (CBP; imports) and the U.S. Bureau of the Census (Census Bureau; exports and imports). These programs collect data on the amount and value of imports and exports categorized under the Harmonized Tariff Schedule (HTS). Many HMS have distinct HTS codes, and some species are further subdivided by product (e.g., fresh or frozen, fillets, steaks, etc.). NMFS provides Census Bureau trade data for marine fish products online for the public at <http://www.st.nmfs.gov/st1/trade/index.html>. Some species are combined into groups (e.g., sharks), which can limit the value of these data for fisheries management when species-specific information is required. Often the utility of these data are further limited if the ocean area of origin for each product is not distinguished. For example, the HTS code for Atlantic, Pacific, and Indian Ocean bigeye tuna is the same.

NMFS implemented the HMS International Trade Permit (ITP) in 2005 (69 FR 67268, November 17, 2004) to identify importers and exporters of HMS products that require trade monitoring documentation (i.e., bluefin tuna, swordfish, and frozen bigeye tuna). Traders of shark fins must also be permitted. Currently there are 253 permit holders distributed among 23 U.S. states and territories (Table 5.9). Copies of the ITP application and all trade monitoring documents associated with these programs are found on the NMFS HMS Management Division webpage at <http://www.nmfs.noaa.gov/sfa/hms/>. These and several other trade monitoring programs established by NMFS for HMS are described in greater detail in the 2011 HMS SAFE Report.

**Table 5.9**      **Number of International Trade Permits (ITPs) by State (as of November 2014)**

State	Number of ITPs	State	Number of ITPs
AS	0	NH	2
CA	69	NJ	10
FL	62	NV	1
GA	2	NY	26
HI	16	OH	1
IL	2	OR	1
LA	2	PA	1
MA	28	RI	5
MD	1	SC	1
ME	7	TX	4
MP	1	VA	1
NC	3	WA	7
Total			253

*Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*

CITES is an international agreement that regulates the global trade in endangered plants and wildlife. The goal of CITES is to protect and regulate species of animals and plants to ensure that commercial demand does not threaten their survival in the wild. Countries cooperate through a system of permits and certificates that confirm the trade of specific species is legal. Species listed on Appendix I are considered to be at risk of extinction, and are prohibited from international commercial trade, except in special circumstances. Species listed on Appendix II are those that are vulnerable to overexploitation, but not at risk of extinction. In every case of an import or export of an Appendix II species, an export/import permit may only be issued if, the export/import will not be detrimental to the survival of the species, the specimen was legally acquired (in accordance with the national wildlife protection laws) and any live specimen will be shipped in a manner which will not cause it any damage. During the sixteenth meeting of the Conference of Parties to CITES (CoP16), the United States and Brazil cosponsored a successful Columbian proposal to list oceanic whitetip shark under Appendix II. The United States cosponsored this listing because of concerns that over-exploitation to supply the international fin trade negatively affects the population status of this species. Three species of hammerhead shark (scalloped, smooth, and great) were also added to Appendix II during CoP16, where they joined previously listed whale, basking, and great white sharks, along with oceanic whitetip shark. These Appendix II listings were effective September 14, 2014.

On June 27, 2012, the CITES Secretariat sent a Notification to the Parties regarding the inclusion of two shark species, scalloped hammerhead (*Sphyrna lewini*) and porbeagle (*Lamna nasus*), in CITES Appendix III. Their inclusion in Appendix III requires member parties to issue CITES permits or certificates for the import, export, and re-export of these species (or any of their parts or products). It also means that any U.S. import, export, or re-export of these species requires a declaration to and clearance from the U.S. Fish and Wildlife Service. In accordance with provisions of Article XVI, paragraph 2 of the CITES Convention, the inclusion of these species in Appendix III took effect 90 days after the Notification (i.e., effective as of September 25, 2012).

### 5.3.1 U.S. Exports of HMS

“Exports” may include merchandise of both domestic and foreign origin. The Census Bureau defines exports of "domestic" merchandise to include commodities that are grown, produced, or manufactured in the United States (e.g., fish caught by U.S. fishermen). For statistical purposes, domestic exports also include commodities of foreign origin which have been altered in the United States from the form in which they were imported, or which have been enhanced in value by further manufacture in the United States. The value of an export is the FAS (free alongside ship) value defined as the value at the port of export based on a transaction price including inland freight, insurance, and other charges incurred in placing the merchandise alongside the carrier. It excludes the cost of loading the merchandise, freight, insurance, and other charges or transportation costs beyond the port of export.

#### *Atlantic and Pacific Bluefin Tuna Exports*

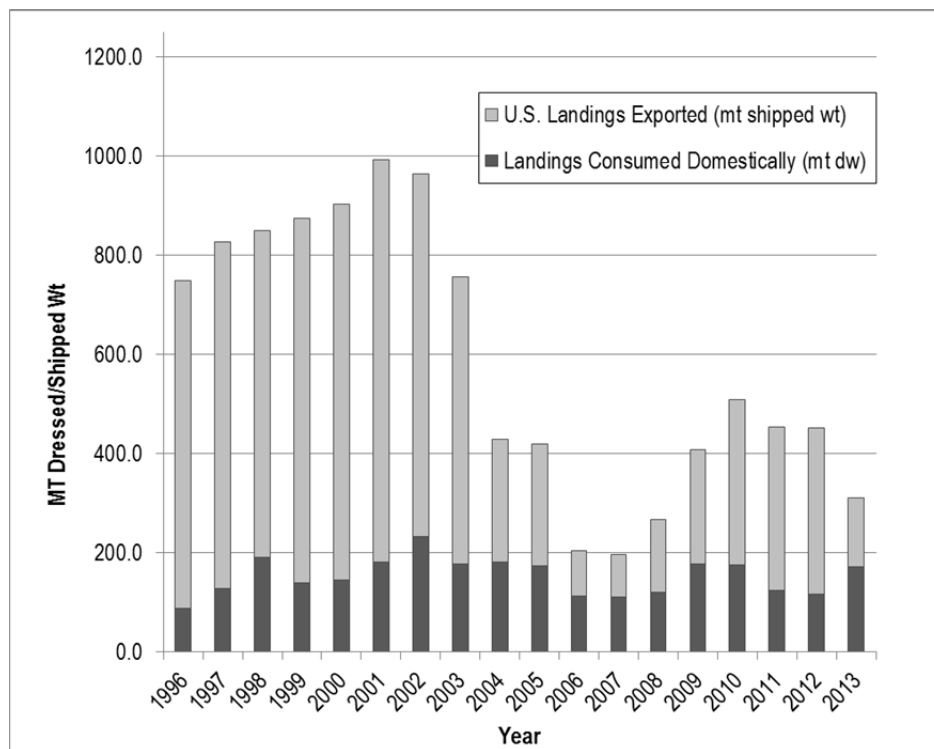
Table 5.10 gives bluefin tuna export data for exports from the United States since 2002 and includes data from the NMFS BCD program and Census Bureau data. The Census Bureau usually reports a greater amount of bluefin tuna exported when compared to the amount reported by NMFS. Additional quality control measures are taken by NMFS to ensure data for other species (e.g., Southern bluefin tuna) or other transaction types (e.g., re-exports) are not erroneously included with bluefin tuna export data. Bluefin tuna re-export data are listed separately later in this section (Table 5.18).

**Table 5.10 United States Exports of Atlantic and Pacific Bluefin Tuna (2003-2013)**

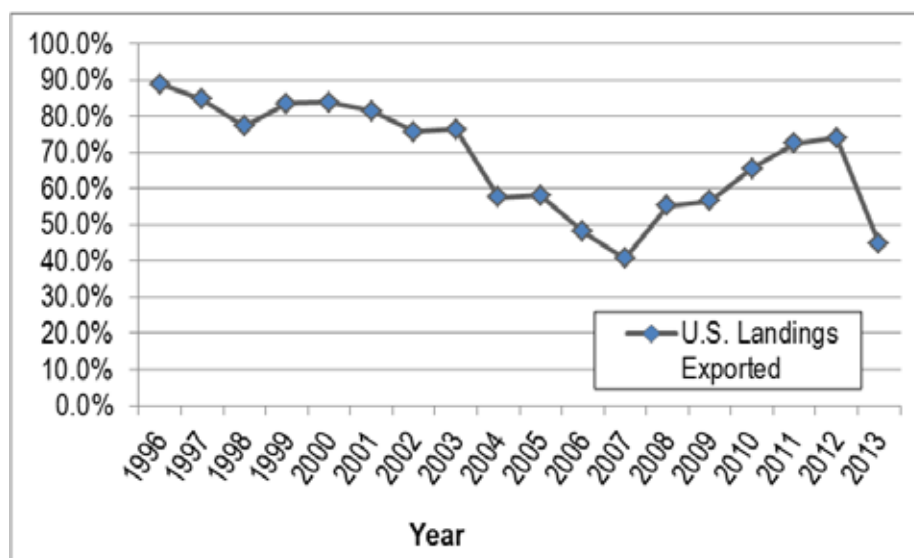
<b>Year</b>	<b>Atlantic BFT Commercial Landings<sup>1</sup> (mt dw)</b>	<b>Atlantic BFT Exports<sup>2</sup> (mt dw)</b>	<b>Pacific BFT Exports<sup>2</sup> (mt dw)</b>	<b>Total U.S. Exports<sup>2</sup> (mt dw)</b>	<b>Total U.S. Exports<sup>3</sup> (mt)</b>	<b>Value of U.S. Exports<sup>3</sup> (\$ million)</b>
2003	756.9	578.7	2.1	580.8	998	11.36
2004	428.6	247.3	0.0	247.3	370	4.50
2005	419.4	245.7	125.1	370.8	454	5.30
2006	204.6	93.1	0.0	93.1	281	3.60
2007	196.4	85.4	8.2	93.6	238	2.90
2008	266.4	146.5	0.0	146.5	177	2.49
2009	408.5	236.2	0.0	236.2	300	4.05
2010	509.5	334.2	0.0	334.2	346	4.90
2011	453.6	329.5	0.8	330.5	293	4.03
2012	452.2	334.5	0.0	334.5	511	4.91
2013	310.4	139.0	0.0	139.0	296	2.92

Note: most exports of Pacific bluefin tuna (BFT) were in round (whole) form, although some exports were of dressed and gilled/gutted fish; Atlantic exports were almost entirely dressed, but also included whole and other product forms (dw); data are preliminary and subject to change. Sources: <sup>1</sup> Northeast Regional Office, <sup>2</sup> NMFS Bluefin Tuna Catch Document Program, and <sup>3</sup> U.S. Census Bureau.

In the time series shown in Table 5.10 and depicted in Figure 5.2, U.S. exports of Atlantic bluefin tuna generally increased when commercial landings increased, while domestic consumption of U.S. landings remained fairly constant (i.e., between 100 and 200 mt) from year to year. Most U.S. bluefin tuna exports are destined for the sushi markets in Japan. As shown in Figure 5.2 and Figure 5.3, the percentage of the commercial U.S. bluefin tuna catch that was exported was lowest when landings declined to their lowest point in 2007, and then increased as landings and percent exports increased through 2010, and percent exports continued to climb through 2012. Landings were low again in 2013, but domestic consumption increased and percent of exports decreased sharply, to the second lowest for the time series. This may have been a reflection of the improved U.S. economy, as imports also increased (Figure 5.4).



**Figure 5.2** Annual U.S. Domestic Landings of Atlantic Bluefin Tuna, Divided into U.S. Export (mt shipped weight) and U.S. Domestic Consumption (mt dw) (1996-2013)



**Figure 5.3 Annual Percentage (by weight) of Commercially-Landed U.S. Atlantic Bluefin Tuna that was Exported (1996-2013)**

#### *Other Tuna Exports*

Export data for other tunas is gathered by the Census Bureau, and includes trade data for albacore, yellowfin, bigeye, and skipjack tuna from all ocean areas of origin combined. The value of annual albacore exports has exceeded the value for any other tuna export for the same year since the beginning of the time series. The total value of albacore exports has remained over \$20 million per year for the last eight years (Table 5.11). Most albacore exports are Pacific in origin, as Atlantic landings have ranged between 189 mt and 640 mt during the time series in Table 5.11, but total U.S. exports has ranged from , mt in 2013 to a low of 7,951 mt in 2005.

**Table 5.11 U.S. Atlantic Landings and Total U.S. Exports of Albacore Tuna (2003–2013)**

Year	Atlantic Landings (mt ww) <sup>1</sup>	U.S. Exports (from all ocean areas) <sup>2</sup>					
		Fresh		Frozen		Total for all Exports	
		Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2003	448	894	1.86	9,731	18.85	10,624	20.71
2004	640	1,360	3.28	10,737	24.11	12,097	27.38
2005	486	549	1.61	7,402	16.99	7,951	18.60
2006	400	378	1.04	8,810	19.56	9,187	20.60
2007	532	275	0.84	11,731	25.52	12,006	26.35
2008	257	997	2.69	7,958	22.54	8,955	25.23
2009	189	417	1.02	9,903	22.58	9,510	23.60
2010	315	1,269	3.25	8,528	23.31	9,798	26.56
2011	422	531	1.47	9,807	23.73	10,338	25.20
2012	418	1,256	4.46	9,787	26.51	11,043	30.97
2013	599	1,481	4.88	13,770	34.73	15,251	39.62

Note: Landings may be calculated on a calendar or fishing year basis; exports may be in whole (ww) or product weight (dw); data are preliminary and subject to change. Sources: <sup>1</sup>NMFS, 2014, <sup>2</sup>U.S. Census Bureau.

Table 5.12 and Table 5.13 show U.S. Atlantic landings and U.S. exports from all ocean areas for yellowfin and skipjack tuna, respectively. Yellowfin exports were greater and more valuable than exports for skipjack or bigeye tuna (Table 5.14) and were unusually high in 2008. The amount of fresh yellowfin product exported usually exceeds the amount of frozen yellowfin product annually, but has been overtaken by frozen product during the last two years. Amounts of frozen yellowfin were the lowest of the time series in 2011, but increased dramatically over the last two years. Table 5.13 shows that the amount and value of exported fresh and frozen skipjack tuna has varied over the eleven year time series without any perceptible pattern. Fresh skipjack exports have fallen consistently over the last five years, to the second lowest value of the time series in 2013. In contrast, in 2013, exported amount (575 mt) and value (\$3.43 million) of product peaked for the time series.

**Table 5.12 U.S. Atlantic Landings and Total U.S. Exports of Yellowfin Tuna (2003-2013)**

Year	Atlantic Landings (mt ww) <sup>1</sup>	U.S. Exports (from all ocean areas) <sup>2</sup>					
		Fresh		Frozen		Total for all Exports	
		Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2003	7,685	1,792	2.93	176	0.68	1,968	3.62
2004	6,437	306	1.54	242	0.31	549	1.86
2005	5,562	158	1.70	291	0.97	449	2.67
2006	7,090	183	1.96	108	0.37	291	2.32
2007	5,529	148	1.75	138	0.44	286	2.19
2008	2,407	198	2.09	4,140	9.06	4,338	11.16
2009	2,802	221	2.51	274	0.66	495	3.17
2010	2,482	211	2.31	70	0.33	281	2.64
2011	3,010	278	3.03	56	0.23	334	3.26
2012	4,100	311	3.35	535	1.91	846	5.26
2013	2,332	224	2.55	624	1.88	848	4.43

Note: Landings may be calculated on a calendar or fishing year basis; exports may be in whole (ww) or product weight (dw); data are preliminary and subject to change. Sources: <sup>1</sup>NMFS, 2014, <sup>2</sup>U.S. Census Bureau.

**Table 5.13 U.S. Atlantic Landings and Total U.S. Exports of Skipjack Tuna (2003-2013)**

Year	Atlantic Landings (mt ww) <sup>1</sup>	U.S. Exports (from all ocean areas) <sup>2</sup>					
		Fresh		Frozen		Total for all Exports	
		Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2003	77	81	0.22	0	0.00	81	0.22
2004	102	55	0.30	140	0.18	196	0.48
2005	30	35	0.14	-	-	35	0.14
2006	61	6	0.02	23	0.04	30	0.06
2007	67	17	0.06	77	0.12	94	0.18
2008	67	31	0.15	350	0.41	381	0.56
2009	119	206	0.54	530	0.71	737	1.25
2010	54	194	0.57	126	0.17	319	0.73
2011	87	162	0.47	14	0.05	176	0.52
2012	112	46	0.17	293	1.17	334	1.34
2013	117	10	0.04	575	3.43	585	3.43

Note: Landings may be calculated on a calendar or fishing year basis; exports may be in whole (ww) or product weight (dw); data are preliminary and subject to change. Sources: <sup>1</sup>NMFS, 2014, <sup>2</sup>U.S. Census Bureau.

Bigeye tuna exports and Atlantic landings are given in Table 5.14. Atlantic landings have been increasing since 2008, but are still below the 2006 high of 991 mt. Annually, bigeye tuna exports include more fresh than frozen product, except in 2008 and 2012 when exports of frozen product were greater (318 mt and 386 mt, respectively). Amounts of both fresh and frozen exports in 2013 (147 mt, 25 mt respectively) dropped substantially from values in 2012 (293 mt and 386 mt, respectively). The total value and amount of bigeye exports in 2012 are the highest in the time series.

**Table 5.14 U.S. Atlantic Landings and Total U.S. Exports of Bigeye Tuna (2003-2013)**

Year	Atlantic Landings (mt ww) <sup>1</sup>	U.S. Exports (from all ocean areas) <sup>2</sup>					
		Fresh		Frozen		Total for all Exports	
		Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2003	480	255	0.47	40	0.08	295	0.56
2004	419	361	1.40	48	0.10	410	1.51
2005	484	431	1.95	50	0.12	481	2.07
2006	991	223	1.69	76	0.20	299	1.89
2007	527	128	1.38	65	0.14	193	1.52
2008	489	145	1.72	318	0.96	462	2.68
2009	515	121	1.53	78	0.19	199	1.72
2010	571	141	1.96	37	0.11	179	2.07
2011	719	199	2.13	44	0.13	243	2.26
2012	867	293	2.38	386	1.14	679	3.52
2013	880	147	1.36	25	0.13	172	1.49

Note: Landings may be calculated on a calendar or fishing year basis; exports may be in whole (ww) or product weight (dw); data are preliminary and subject to change. Sources: <sup>1</sup>NMFS, 2014, <sup>2</sup>U.S. Census Bureau.

## *Shark Exports*

Export data for sharks are gathered by the Census Bureau, and include trade data for sharks from any ocean area of origin. Shark exports are not categorized to the species level, with the exception of spiny dogfish, and are not identified by specific product code other than fresh or frozen meat and fins. Due to the popular trade in shark fins and their high relative value compared to shark meat, a specific HTS code was assigned to shark fins in 1998. It should be noted that there is no tracking of other shark products besides meat and fins. Therefore, NMFS cannot track trade in shark leather, oil, or shark cartilage products.

Table 5.15 indicates the magnitude and value of shark exports by the United States from 2003 – 2013. Exports of shark fins were lowest in 2008 and 2012 (11 mt), followed by 2013 (12 mt). The price of shark fins was greatest in 2011 (\$100.67/kg). Also of note is the dramatic increase in export of frozen shark products in 2008 and the decrease in 2011 to the lowest value in the time series and the sharp increase again in 2013.

**Table 5.15 Amount and Value of U.S. Shark Products Exported (2003-2013)**

Year	Dried Shark Fins			Non-specified Fresh Shark			Non-specified Frozen Shark			Total for All Exports	
	Amount (mt)	Value (\$ MM)	Value (\$/kg)	Amount (mt)	Value (\$ MM)	Value (\$/kg)	Amount (mt)	Value (\$ MM)	Value (\$/kg)	Amount (mt)	Value (\$ MM)
2003	45	4.03	87.79	837	1.31	1.57	592	1.34	2.28	1,476	6.70
2004	63	3.02	47.53	536	1.18	2.21	472	0.98	2.09	1,071	5.18
2005	31	2.37	76.93	377	1.03	2.73	494	1.06	2.15	902	4.46
2006	34	3.17	94.66	816	1.62	1.99	747	1.38	1.85	1,597	6.17
2007	19	1.78	93.68	502	1.05	2.09	695	1.35	1.94	1,216	4.18
2008	11	0.69	63.00	559	1.21	2.16	4,122	7.21	1.75	4,692	9.11
2009	56	2.82	50.36	254	0.72	2.83	320	1.33	4.16	630	4.87
2010	36	2.89	80.28	222	0.67	3.02	244	0.52	2.11	502	4.08
2011	15	1.51	100.67	333	0.89	2.66	59	0.22	3.77	407	2.62
2012	11	0.99	91.75	436	1.08	2.47	106	4.52	4.28	1,501	6.58
2013	12	0.79	65.63	196	0.57	2.90	1043	5.21	5.00	1,250	6.57

\$ MM – millions of dollars. Note: Exports may be in whole (ww) or product weight (dw); data are preliminary and subject to change. Source: U.S. Census Bureau.



### *Swordfish Exports*

Swordfish HTS categories were modified in 2007 and again in 2012. The low cost and year round availability of swordfish imports into the United States are believed to have reduced the marketability of U.S. domestic swordfish, and created a modest export market for U.S. product in recent years (i.e., since 2007, Table 5.16).

**Table 5.16 Amount and Value of U.S. Swordfish Product Exported (2007-2013)**

Year	Swordfish Fillet				Swordfish				Swordfish Meat				Total	
	Fresh		Frozen		Fresh		Frozen		Fresh		Frozen		Total	
	Amount (mt)	Value (\$ MM)	Amount (mt)	Value (\$ MM)	Amount (mt)	Value (\$ MM)	Amount (mt)	Value (\$ MM)	Amount (mt)	Value (\$ MM)	Amount (mt)	Value (\$ MM)	Amount (mt)	Value (\$ MM)
2007	38	0.33	11	0.08	135	0.91	11.0	0.04	-	-	216.0	0.69	412	2.1
2008	24	0.25	48	0.34	121	0.89	1.2	0.01	-	-	154.0	0.88	349	2.4
2009	43	0.38	19	0.23	133	0.81	12.1	0.04	-	-	24.0	0.13	231	1.6
2010	98	0.71	16	0.15	134	0.78	0.6	0.01	-	-	3.0	0.02	252	1.7
2011	32	0.26	31	0.28	134	0.80	72.4	0.45	-	-	0.5	0.01	269	1.8
2012	0	0.01	4	0.05	141	0.82	10.8	0.09	7.0	0.09	4.5	0.03	168	1.1
2013	0	0	18	0.09	160	0.87	13.0	0.13	2.6	0.04	2.4	0.02	196	1.2

\$ MM – in millions of dollars. Source: U.S. Census Bureau.

### *Re-exports of Atlantic HMS*

For purposes of international trade tracking of HMS, the term “re-export” refers to a product that has been entered for consumption into the United States and then exported to another country, with or without further processing in the United States (from 50 CFR Part 300, Subpart M, International Trade Documentation and Tracking Programs for HMS). For most HMS species for most years, re-export activity is a small fraction of export activity and well below relative reference points of 1,000 mt and/or one million dollars annually. Re-exports of yellowfin tuna (fresh or frozen) and shark fins most frequently exceed these values. Annual re-export figures in excess of these relative reference points are given in Table 5.17.

In previous editions of SAFE reports, bluefin tuna re-exports for 2003-2005 reflected a great deal of transshipment from Mexico through the United States to Japan. Implementation of the HMS ITP regulations in 2005 (69 FR 67268, November 17, 2004) changed the way re-exports and transshipments were distinguished. Table 5.18 shows re-exports of bluefin tuna since 2003, and is updated to reflect these changes for previous years. Re-exports of bluefin tuna in 2013 were particularly high.

**Table 5.17 Re-exports of HMS (Excluding Bluefin Tuna) in Excess of 1000 mt and/or One Million U.S. Dollars (2004–2013)**

Year	Product	Amount (mt)	Value (\$ million)
2004	Shark fins, dried	29	1.84
2005	Yellowfin tuna, fresh	123	2.30
	Shark fins, dried	34	1.53
2006	Yellowfin tuna, fresh	208	2.62
2007	Yellowfin tuna, fresh	208	2.91
	Yellowfin tuna, frozen	506	1.80
2008	Yellowfin tuna, fresh	224	3.40
	Shark fins, dried	26	1.37
2009	Yellowfin tuna, fresh	162	2.18
2010	Yellowfin tuna, fresh	130	1.88
	Yellowfin tuna, frozen	340	1.12
2011	Yellowfin tuna, fresh	117	1.85
	Swordfish fillet, frozen	302	2.70
	Shark fins, dried	23	1.42
2012	Yellowfin tuna, fresh	123	2.26
	Yellowfin tuna, frozen	515	1.63
	Shark fins*	41	1.86
	Shark, unspecified, frozen	405	1.46
2013	Yellowfin tuna, fresh	102	1.80

\* In 2012, the product classification “shark fin, dried” in the HTS was renamed “shark fins.” Source: U.S. Census Bureau.

### *Summary of Atlantic HMS Exports*

As indicated in the previous section, the value of HMS exports (from all ocean areas combined) is nationally dominated by tuna products. In 2013, fresh and frozen tuna products

accounted for 19,548 mt dw or 1.4 percent of the 1,380,271 mt dw of fresh and frozen seafood products exported from the United States, as indicated in *Fisheries of the United States, 2013*. The value of these HMS products accounted for \$60.2 million, out of a national total of \$4.7 billion.

Data reflecting international trade of HMS species harvested from all ocean areas are of limited value for describing trade of HMS harvested from the Atlantic Ocean. For example, Atlantic landings of albacore tuna (commercial and recreational) for 2013 were reported in the 2014 U.S. National Report to ICCAT as 599 mt (Table 5.11). National trade data show that over 15,251 mt of albacore were exported in 2013, indicating the majority of albacore exports were Pacific Ocean product. Trade tracking programs such as the bluefin tuna, swordfish, and bigeye tuna consignment document programs are more accurate for tracking the international disposition of Atlantic HMS.

### 5.3.2 U.S. Imports of HMS

All import shipments must be reported to and cleared by CBP. “General” imports are reported when a commodity enters the country, and “consumption” imports consist of entries into the United States for immediate consumption combined with withdrawals from CBP bonded warehouses. “Consumption” import data reflect the actual entry of commodities originating outside the United States into U.S. channels of consumption. As discussed previously, CBP data for certain products are provided to NMFS for use in implementing consignment document programs. U.S. Census Bureau import data are used by NMFS as well.

#### *Atlantic and Pacific Bluefin Tuna Imports*

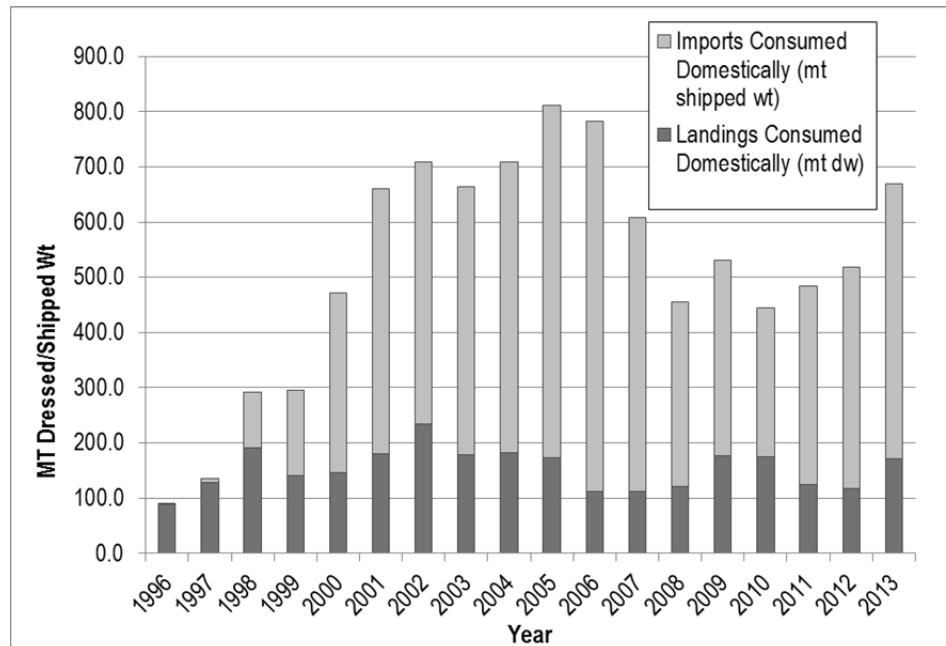
United States imports and re-exports of bluefin tuna for 2003 through 2013, as reported through both CBP and BCD program data, are shown in Table 5.18.

**Table 5.18 U.S. Imports and Re-exports of Atlantic and Pacific Bluefin Tuna (2003–2013)**

Year	NMFS BFT Catch Document Program		U.S. Customs and Border Protection Data	
	Imports (mt)	Re-exports (mt)	Imports (mt)	Value (\$ million)
2003	649.9	38.4	780.3	11.67
2004	823.4	17.1	886.1	15.25
2005	966.1	10.4	1,064.0	19.96
2006	791.5	18.5	865.2	17.05
2007	584.6	17.7	697.1	13.97
2008	412.7	16.8	487.1	11.91
2009	407.7	33.6	476.8	10.29
2010	569.5	61.6	682.5	15.75
2011	442.5	35.1	555.4	14.01
2012	400.2	25.9	770.4	14.74
2013	568.9	71.3	1,177.5	20.52

Note: Most imports of bluefin tuna (BFT) were in dressed form, and some were round and gilled/gutted fish, fillets or belly meat (dw); data are preliminary and subject to change. Southern BFT trade was included in figures for Atlantic and Pacific BFT trade prior to 2002. Sources: NMFS Bluefin Tuna Catch Document Program and U.S. Customs and Border Protection.

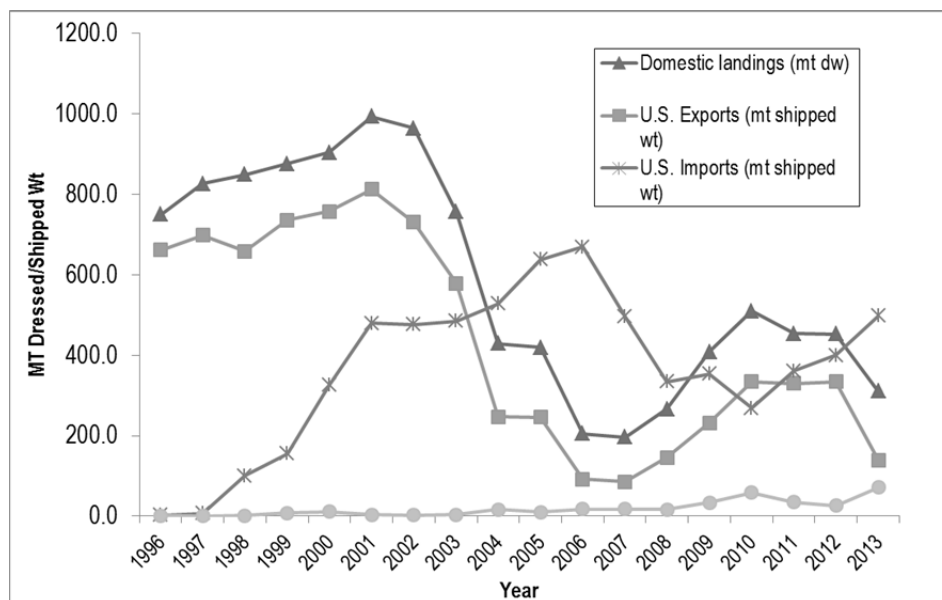
The rise in popularity of sashimi in the United States may have generated the increase in imports of bluefin tuna in the mid part of the decade, as seen in Table 5.18. Dealers have reported an expanded domestic market for both locally-caught and imported raw tuna. U.S. consumption of bluefin tuna (landings + imports – exports – re-exports) generally increased from 1996 to a high of approximately 800 mt in 2005, and generally ranged between 400 and just over 500 mt since 2008, with another spike in 2013 (Figure 5.4). Consumption of domestic landings has been fairly consistent, ranging between about 100 mt to 200 mt per year. Consumption of imported bluefin tuna is more variable and ranges from a low in 1997 of less than 50 mt to a high in 2006 of almost 700 mt.



**Figure 5.4 U.S. Annual Consumption of Atlantic Bluefin Tuna, by Imports and U.S. Landings (1996-2013)**

Annual U.S. imports, re-exports, exports (mt shipped wt), and landings (mt dw) are also depicted. Consumption = landings + imports – exports – re-exports.

Figure 5.5 shows U.S. domestic landings of Atlantic bluefin tuna and trade of bluefin tuna since 1996. From 2004 through 2013, the United States imported more bluefin tuna than it exported (except for 2010). This trade gap was greatest between 2005 and 2007, and increased again in 2013.



**Figure 5.5 U.S. Domestic Landings (mt dw) and Trade (mt shipped wt) of Bluefin Tuna (1996-2013)**

#### *Other Tuna Imports*

CBP collects species-specific import information for bigeye tuna, grouped to include all ocean areas. The total amount of bigeye tuna imports has ranged between 3,498 (2011) and 8,059 mt (2008) over the time series, as shown in Table 5.19. Total imports of fresh bigeye since 2010 have been below the eleven year annual average of 6.114 mt. .

**Table 5.19 U.S. Imports of Bigeye Tuna from All Ocean Areas Combined (2003-2013)**

Year	Fresh		Frozen		Total for all Imports	
	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2003	7,312	51.01	560	1.48	7,872	52.49
2004	6,752	49.10	1,175	2.62	7,928	51.73
2005	5,040	38.18	1,539	3.33	6,579	41.51
2006	4,920	36.55	1,523	3.15	6,442	39.70
2007	5,617	42.30	1,512	3.19	7,129	45.49
2008	5,462	41.43	2,597	5.31	8,059	46.74
2009	5,459	41.72	1,125	2.36	6,584	44.08
2010	4,025	32.39	316	0.73	4,340	33.12
2011	3,011	26.72	487	1.01	3,498	27.73
2012	3,723	33.43	580	1.22	4,304	34.65
2013	4,023	35.50	498	1.02	4,521	36.52

Note: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change.  
Source: U.S. Census Bureau.

Annual yellowfin tuna imports into the United States for all ocean areas combined are given in Table 5.20. As indicated by the data in this section, yellowfin tuna products are imported in the greatest quantity of all fresh and frozen tuna products. The annual value and total amount of yellowfin imports had generally increased from 2003 to 2007 and have been lower since then. Most imported yellowfin products are fresh. The least amount of yellowfin imported during this time series was in 2009.

**Table 5.20 U.S. Imports of Yellowfin Tuna from All Ocean Areas Combined (2003–2013)**

Year	Fresh		Frozen		Total for all Imports	
	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2003	15,299	94.03	5,579	39.67	20,878	133.71
2004	15,624	99.41	5,833	35.35	21,457	134.96
2005	17,064	116.58	6,002	46.89	23,066	163.47
2006	17,792	126.47	5,442	42.78	23,234	169.25
2007	17,985	137.42	5,506	44.26	23,492	181.69
2008	15,904	129.59	3,847	27.97	19,751	157.56
2009	14,199	112.34	2,868	24.73	17,067	137.07
2010	15,985	128.69	2,077	16.91	18,062	145.60
2011	15,635	141.83	2,398	17.56	18,033	159.39
2012	15,829	152.66	2,076	25.84	17,905	178.52
2013	16,024	156.49	2,602	24.69	18,626	181.18

Note: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change.  
Source: U.S. Census Bureau.

The amount of fresh and frozen albacore imports from all ocean areas were greatest in 2003 (Table 5.21) and has remained relatively low compared to 2003 quantities. In 2003, albacore imports were valued at \$30.02 million while in 2005 the value dropped to \$5.3 million, and has remained relatively low. Import amounts and value have been fairly stable over the last

several years, with small upticks in 2011 and 2013. Products in airtight containers (e.g., cans or foil pouches) are not included in these data.

**Table 5.21 U.S. Imports of Albacore Tuna from All Ocean Areas Combined (2003-2013)**

Year	Fresh		Frozen		Total for all Imports	
	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2003	1,062	4.11	12,569	25.90	13,632	30.02
2004	1,004	3.12	4,943	11.67	5,947	14.80
2005	706	2.38	1,016	2.96	1,722	5.34
2006	876	3.54	667	1.71	1,543	5.25
2007	945	3.86	718	1.98	1,664	5.86
2008	703	2.95	1,632	4.73	2,335	7.68
2009	718	3.07	1,493	3.46	2,211	6.53
2010	519	2.19	1,860	5.17	2,380	7.36
2011	669	3.05	3,794	7.17	4,462	10.22
2012	748	3.53	1,178	2.61	1,926	6.14
2013	858	3.57	2,199	4.27	3,057	7.84

Note: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change.  
Source: U.S. Census Bureau.

Skipjack tuna imports into the United States are comprised mainly of frozen product (Table 5.22). The amount of skipjack imports is variable over this time series, ranging from a low of 112 mt in 2004 to a high of 1,023 mt in 2006. Import value was the highest for 2012 (\$1.21 million), which was the year with the second largest import amount (890 mt) for the time series. Products in airtight containers (e.g., cans or foil pouches) are not included in these data.

**Table 5.22 U.S. Imports of Skipjack Tuna from All Ocean Areas Combined (2003–2013)**

Year	Fresh		Frozen		Total for all Imports	
	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2003	0	0	224	0.43	224	0.43
2004	<1	<0.01	110	0.26	112	0.27
2005	0	0	652	0.67	652	0.67
2006	140	0.14	883	0.84	1,023	0.98
2007	31	0.06	835	0.73	866	0.79
2008	14	0.02	685	0.77	699	0.79
2009	20	0.04	498	0.63	519	0.67
2010	36	0.09	542	0.79	578	0.87
2011	2	0.05	594	0.92	595	0.96
2012	23	0.05	866	1.16	890	1.21
2013	38	0.11	272	0.51	310	0.62

Note: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change.  
Source: U.S. Census Bureau.

## Swordfish Imports

Table 5.23 summarizes swordfish import data collected by NMFS' Swordfish Statistical Document Program for the 2013 calendar year. According to these data, most swordfish imports were Pacific Ocean product from Central and South America. For Atlantic product, most North Atlantic imports came from Canada, and South Atlantic product came from Brazil and South Africa. CBP data located at the bottom of the table reflect a larger amount of imports than reported by the import monitoring program, and may be used by NMFS staff to follow up with importers, collect statistical documents that have not been submitted, and enforce dealer reporting requirements.

**Table 5.23 U.S. Imports of Swordfish, by Flag of Harvesting Vessel and Area of Origin (2013)**

Flag of Harvesting Vessel	Ocean Area of Origin							Total (mt dw)
	Atlantic (mt dw)	North Atlantic (mt dw)	South Atlantic (mt dw)	Pacific (mt dw)	Western Pacific (mt dw)	Indian (mt dw)	Not Provided (mt dw)	
Australia	-	-	-	1.18	167.64	-	1.66	170.48
Brazil	2.10	-	482.65	-	-	-	2.37	487.12
Canada	-	1,016.63	-	-	-	-	-	1,016.63
Chile	-	-	-	454.14	-	-	8.56	462.70
China	-	-	34.51	85.99	-	18.38	-	138.88
Chinese Taipei	-	-	6.40	243.18	-	319.83	-	569.41
Costa Rica	-	-	-	754.23	-	-	-	754.23
Ecuador	-	-	-	1,623.21	-	1.52	-	1,624.73
Fiji Islands	-	-	-	38.34	14.63	-	6.59	59.56
France	-	9.60	-	-	-	-	-	9.60
French Polynesia	-	-	-	1.98	-	-	-	1.98
Indonesia	-	-	-	-	-	292.57	40.95	333.52
Marshall Islands	-	-	-	1.54	-	-	-	1.54
Mexico	-	-	6.00	319.07	-	-	4.00	329.07
New Zealand	-	-	-	-	354.60	-	1.49	356.09
Nicaragua	-	-	-	9.61	-	-	-	9.61
Panama	-	-	-	420.77	-	-	-	420.77
Philippines	-	-	-	-	-	14.92	-	14.92
Seychelles	-	-	-	-	-	13.39	-	13.39
South Africa	0.18	-	125.40	1.34	-	122.58	8.52	258.02
Spain	-	-	-	36.56	-	-	-	36.56
Thailand	-	-	-	-	-	-	25.00	25.00
Trinidad & Tobago	-	5.66	0.19	-	-	-	0.48	6.33
Turks and Caicos Islands	-	4.08	-	-	-	-	-	4.08
Vanuatu	-	-	-	28.30	-	-	-	28.30
Vietnam	-	-	-	261.18	-	-	-	261.18
Total Imports Reported by SDs	2.28	1,035.97	655.15	4,280.62	563.87	783.19	99.62	7,393.70
Total Imports Reported by U.S. Customs & Border Protection								8,407.27
Total Imports Not Reported by SDs								1,013.57

Source: NMFS Swordfish Statistical Document (SD) Program.



Table 5.24 indicates the amount and value of swordfish products imported by the United States from 2003 to 2013, as recorded by the U.S. Census Bureau, for all ocean areas combined. New import product categories were added in 2007. The amount of each product imported per year and annual totals for product and value were fairly consistent over the past several years. Total imports have generally fallen since their peak in 2003.

**Table 5.24 Imported Swordfish Products (2003-2013)**

Year	Fresh (mt)		Frozen (mt)					Total for All Imports	
	Steaks	Other	Fillets	Steaks	Other			(mt)	(\$ million)
2003	147	8,079	3,929	433	560			13,150	75.62
2004	157	6,568	3,261	387	351			10,726	70.95
2005	172	6,388	2,957	367	304			10,187	77.17
2006	77	6,830	2,875	351	201			10,334	75.63
				Meat					
	Fillets*	Steaks	Other	Fillets	Steaks	> 6.8 kg*	≤ 6.8 kg*	Other	
2007	174	84	5,412	2,520	171	118	737	205	9,422 70.85
2008	96	13	5,658	2,673	170	55	207	88	8,962 68.98
2009	53	10	5,312	1,632	112	96	23	33	7,272 55.85
2010	125	2	5,228	2,077	153	277	45	31	7,939 68.33
2011	74	1	5,060	2,116	139	1,384	471	12	9,258 68.64
2012	13	2	5,478	2,013	604	824	42	14	8,992 77.01
2013	31	2	6,009	1,394	457	182	4	12	8,091 71.38

\* HTS classification changed as of 2007. NOTE: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change. Source: U.S. Census Bureau.

### *Shark Imports*

Similar to HMS imports other than bluefin tuna, swordfish, and frozen bigeye tuna, NMFS does not require shark importers to collect and submit information regarding the ocean area of catch. Shark imports are also not categorized by species, and lack specific product information on imported shark meat such as the proportion of fillets and steaks. The condition of shark fin imports (e.g., wet, dried, or further processed products such as canned shark fin soup) is also not collected. There is no longer a separate tariff code for shark leather, so its trade is not tracked by CBP or Census Bureau data.

Based on a report from 1996, the United States was an important trans-shipment port for shark fins, which were imported wet, and then processed and exported dried. At that time, U.S.-caught shark fins were exported to Hong Kong or Singapore for processing, and then imported back into the United States for consumption by urban-dwelling Asian Americans (Rose, 1996). In recent years, it appears that the importance of the United States as a transshipment port has decreased since shark fin imports have decreased (

Table 5.25).

Table 5.25 summarizes Census Bureau data on shark imports for 2003 through 2013. Imports of fresh and frozen shark have decreased significantly over time while imports of shark fins have been variable. As of July 2, 2008, shark fin importers, exporters, and re-exporters are required to be permitted under NMFS' HMS ITP regulations (73 FR 31380). Permitting of shark fin traders was implemented to assist in enforcement and monitoring trade of this valuable commodity.

**Table 5.25 U.S. Imports of Shark Products from All Ocean Areas Combined (2003-2013)**

Year	Shark Fins Dried		Non-specified Fresh Shark		Non-specified Frozen Shark		Total for All Imports	
	(mt)	(\$ million)	(mt)	(\$ million)	(mt)	(\$ million)	(mt)	(\$ million)
2003	11	0.01	515	0.72	100	0.99	626	1.82
2004	14	0.34	650	1.00	156	2.35	821	3.70
2005	27	0.75	537	1.02	147	2.27	711	4.04
2006	28	1.38	338	0.68	93	1.35	459	3.41
2007	29	1.68	548	1.03	174	1.04	751	3.75
2008	29	1.74	348	0.72	189	1.88	566	4.34
2009	21	0.97	180	0.37	125	1.50	326	2.83
2010	34	1.18	114	0.33	34	1.16	182	2.66
2011	58	1.79	72	0.22	32	1.20	162	3.21
2012*	43	0.77	88	0.30	9	0.07	141	1.14
2013	63	0.74	15	0.46	3	0.05	219	1.25

Note: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change. \* In 2012, the product classification "shark fin, dried" in the HTS was renamed "shark fins." Source: U.S. Census Bureau.

### 5.3.3 The Use of Trade Data for Management Purposes

Trade data has been used in a number of ways to support the international management of HMS. When appropriate, the SCRS uses trade data on bluefin tuna, swordfish, bigeye tuna, and yellowfin tuna that are submitted to ICCAT as an indication of landings trends. These data can then be used to augment estimates of fishing mortality of these species, which improves scientific stock assessments. Trade data can also be used to assist in assessing compliance with ICCAT recommendations and identify those countries whose fishing practices diminish the effectiveness of ICCAT conservation and management measures. For examples of the use of trade data, please see this section of the 2011 HMS SAFE Report.

**Table 5.26 Summary and Current Status of ICCAT-Recommended Trade Sanctions for Bluefin Tuna, Swordfish, and Bigeye Tuna Implemented by the United States**

Country	Species	ICCAT-Recommended Sanction	U.S. Sanction Implemented	ICCAT Sanction Lifted	U.S. Sanction Lifted
Panama	Bluefin tuna	1996	1997	1999	2000
Honduras	Bluefin tuna	1996	1997	2001	2004
	Bigeye tuna	2000	2002	2002	2004
	Swordfish	1999	2000	2001	2004
Belize	Bluefin tuna	1996	1997	2002	2004
	Swordfish	1999	2000	2002	2004
	Bigeye tuna	2000	2002	2002	2004
Equatorial Guinea	Bluefin tuna	1999	2000	2004	2005
	Bigeye tuna	2000	2002	2004	2005
Cambodia	Bigeye tuna	2000	2002	2004	2005
St. Vincent & the Grenadines	Bigeye tuna	2000	2002	2002	2004
Bolivia	Bigeye tuna	2002	2004	2011	2012
Sierra Leone	Bluefin tuna	2002	2004	2004	2005
	Bigeye tuna	2002	2004	2004	2005
	Swordfish	2002	2004	2004	2005
Georgia	Bigeye tuna	2003	2004	2011	2012

## 5.4 Recreational Fisheries

HMS recreational fishing provides significant positive economic impacts to coastal communities that are derived from individual angler expenditures, recreational charters, tournaments, and the shoreside businesses that support those activities.

The Deepwater Horizon/BP Oil Spill in the Gulf of Mexico affected recreational fisheries in the Gulf of Mexico due to a series of fishery closures of various sizes that began on May 2, 2010 and continued until April 19, 2011. More information about the Deepwater Horizon/BP Oil Spill is available at [http://sero.nmfs.noaa.gov/deepwater\\_horizon\\_oil\\_spill.htm](http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm). The impacts of the oil spill and related fishery closures continue to be investigated.

### 5.4.1 Recreational Angling

A report summarizing the results of the 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation was released in August 2012. This report, which is the 12<sup>th</sup> regarding a series of surveys that has been conducted about every 5 years since 1955, provides relevant information such as the number of anglers, expenditures by type of fishing activity, number of participants and days of participation by animal sought, and demographic characteristics of participants. The final national report and the data CD-ROM are available from the U.S. Fish and Wildlife Service (USFWS). More information on the 2011 national survey is available at <http://www.fws.gov/pacific/news/news.cfm?id=2144375111>.

In 2011, NMFS conducted the National Marine Recreational Fishing Expenditure Survey to collect national level data on trip and durable good expenditures related to marine recreational fishing, and estimate the associated economic impact (Lovell et al., 2013). Nationally, marine anglers were estimated to have spent \$4.4 billion on trip related expenses (e.g., fuel, ice, and

bait), and \$19 billion on fishing equipment and durable goods (e.g., fishing rods, tackle, and boats). Using regional input-output models, these expenditures were estimated to have generated \$56 billion in total economic impacts, and supported 364 thousand jobs in the United States in 2011.

This survey also included a separate survey of HMS Angling permit holders from the LPS region (Maine to Virginia) plus North Carolina (Hutt et al., 2014). Estimated trip-related expenditures and the resulting economic impacts for HMS recreational fishing trips are presented in Table 5.27. For the HMS Angler Expenditure Survey, randomly selected HMS Angling permit holders were surveyed every two months, and asked to provide data on the most recent fishing trip in which they targeted HMS. Anglers were asked to identify the primary HMS they targeted, and their expenditures related to the trip. Of the 2,068 HMS anglers that returned a survey, 1,001 anglers indicated they targeted a species of tuna (i.e., bluefin, yellowfin, bigeye, or albacore tuna) on their most recent private boat trip, or simply indicated they fished for tuna in general without identifying a specific species. Of the rest of those surveyed, 88 reported on trips targeting billfish (i.e., blue marlin, white marlin, sailfish), 105 reported on trips targeting shark (i.e., shortfin mako, thresher shark, blacktip shark), and 874 either reported on trips that did not target HMS or failed to indicate what species they targeted. Average trip expenditures ranged from \$534/trip for tuna trips to \$900 for billfish trips. Boat fuel was the largest trip-related expenditure for all HMS trips, and made up about 73 percent of trip costs for billfish trips, which is not unexpected given the predominance of trolling as a fishing method for billfish species such as marlin. Total trip-related expenditures for 2011 were estimated by expanding average trip-related expenditures by estimates of total directed boat trips per species group from the LPS and MRIP. Total expenditures were then divided among the appropriate economic sectors, and entered into an input-output model to estimate total economic output and employment supported by the expenditures within the study region (coastal states from Maine to North Carolina). Overall, \$23.2 million of HMS angling trip-related expenditures generated approximately \$31.3 million in economic output, and supported 216 full time jobs from Maine to North Carolina in 2011.

**Table 5.27 HMS Recreational Fishing Trip Related Expenditures and Economic Impacts for Directed HMS Private Boat Trips (ME - NC, 2011)**

Variable	Tuna Trips	Billfish Trips	Shark Trips	All HMS Trips
Sample size by species targeted	1,001	88	105	1,194
Average trip expenditures	\$534	\$900	\$567	\$587
Total directed HMS private boat trips *	27,648	5,123	6,669	39,440
Total trip-related expenditures	\$14,775,000	\$4,612,000	\$3,781,000	\$23,168,000
Total economic output	\$19,864,000	\$6,036,000	\$5,443,000	\$31,343,000
Employment (Full time job equivalents)	136	39	41	216

Sources: 2011 mail survey of Atlantic HMS Angling permit holders and \*Large Pelagics Survey.

In addition to collecting data on HMS angling trip expenditures and economic impacts, the 2011 expenditure survey also collected data on HMS angler expenditures on durable goods used for marine angling (i.e., boats, vehicles, tackle, electronics, second homes). HMS anglers were found to spend \$10,410 on average for durable goods and services related to marine recreational fishing, of which \$5,516 could be attributed to HMS angling (based on their ratio of

HMS trips to total marine angling trips). The largest expenditures items for marine angler durable goods among HMS anglers were for new boats (\$3,178), boat storage (\$1,258), and boat maintenance (\$1,085). HMS anglers were estimated to have spent a total of \$76 million on durable goods for HMS angling which in turn were estimated to generate \$116 million in economic output, and support 727 jobs from Maine to North Carolina in 2011 (Hutt et al., 2014).

On May 9, 2014, NMFS announced that it will begin work on the 2014 National Marine Recreational Fishing Expenditure Survey. The upcoming survey will be conducted in two parts. The first part of the survey will collect information on expenditures and durable goods from randomly selected anglers with saltwater fishing licenses in coastal states. The second part of the survey, focusing on trip-related expenditures, will be conducted in 2016. The 2014 expenditure survey will also include a targeted survey of approximately 1,200 Atlantic Highly Migratory Species (HMS) Angling permit holders. Such a targeted survey will provide expenditure data on a unique group of anglers that are typically under-represented in national surveys.

#### **5.4.2 Atlantic HMS Tournaments**

For detailed information about HMS tournaments, please see Sections 4.4.2 (landings) and 8.1 (HMS tournament characterization) of this document, the 2006 Consolidated HMS FMP, and the 2011 HMS SAFE Report.

#### **5.4.3 Atlantic HMS Charter and Party Boat Operations**

At the end of 2004 and 2012, NMFS collected market information regarding advertised charterboat rates. The analysis of this data focused on advertised rates for full day charters. Full day charters vary from 6 to 14 hours long with a typical trip being 10 hours. The average price for a full day boat charter was \$1,053 in 2004 and \$1,200 in 2012. Sutton et al., (1999) surveyed charterboats throughout Alabama, Mississippi, Louisiana, and Texas in 1998 and found the average charterboat base fee to be \$762 for a full day trip. Holland et al. (1999) conducted a similar study on charterboats in Florida, Georgia, South Carolina, and North Carolina and found the average fee for full day trips to be \$554, \$562, \$661, and \$701, respectively. Comparing these two studies conducted in the late 1990s to the average advertised daily HMS charterboat rate in 2004 and 2012, it is apparent that there has been a significant increase in charterboat rates.

In 2013, NMFS executed a logbook study to collect cost and earnings data on charter and headboat trips targeting HMS throughout the entire Atlantic HMS region (Maine to Texas). The HMS Cost and Earning Survey commenced in July 2013, and ended in November 2013. Preliminary data indicate that only 55 percent of HMS Charter/Headboat permit holders reported actively taking for-hire trips, with the remaining 45 percent indicating that they either did not actively take for-hire trips, or no longer possessed the vessel tied to the permit. While economic data are not yet available from the study, preliminary data on the number and percentage of trips by species targeted per region and overall are presented in Table 5.28. Primary target species varied considerably across regions for charter/headboat trips with yellowfin tuna (45%) being the primary target species overall. Regionally, bluefin tuna (73%) were the primary target species in the northeast Atlantic followed by pelagic sharks (42%) (i.e., shortfin mako, blue sharks, thresher sharks). In the mid-Atlantic region, HMS trips primarily targeted yellowfin (76%) and bigeye tuna (69%); whereas charter/headboat trips in the south Atlantic primarily targeted yellowfin tuna (53%), sailfish (50%), and marlin (48%). In Florida (analyzed separately here as

preliminary data did not allow for separating trips originating on the Atlantic and Gulf Coasts), the majority of trips targeted species other than HMS (e.g., dolphin fish, wahoo), but 38% percent targeted sailfish. Finally, in the Gulf of Mexico, the majority (60%) of HMS charter/headboat trips targeted coastal sharks.

**Table 5.28 Percent of HMS Charter/Headboat Trips by Region and Target Species (2013)**

Species	N. Atlantic	Mid-Atlantic	S. Atlantic	Florida	Gulf of Mexico	Overall*
Bluefin tuna	73.1	17.1	3.8	1.1	0.0	7.8
Yellowfin tuna	23.1	76.1	53.3	10.5	38.1	45.1
Albacore tuna	19.2	27.3	7.9	0.0	0.0	8.5
Bigeye tuna	11.5	69.3	2.5	6.3	5.3	14.6
Skipjack tuna	0.0	3.4	7.9	9.5	2.7	6.0
Marlin	11.5	14.8	47.9	12.6	22.1	29.8
Swordfish	11.5	28.4	0.0	12.6	8.0	8.7
Sailfish	0.0	0.0	50.4	37.9	8.9	29.7
Pelagic sharks	42.3	17.1	0.0	0.0	1.8	5.0
Coastal sharks	11.5	4.6	32.9	12.6	60.2	29.7
Other species	15.4	23.9	39.6	56.8	15.9	34.1

North Atlantic includes: RI, MA, NH, and ME. Mid-Atlantic includes: CT, NY, NJ, DE, MD, and VA. South Atlantic includes: NC, SC, and GA. Gulf of Mexico includes: AL, MS, LA, and TX. Florida was reported separately as currently available data did not permit separating Atlantic and Gulf of Mexico trips. \* Percentages exceed 100 percent as most trips targeted multiple species.

## 5.5 Review of Regulations under Section 610 of the Regulatory Flexibility Act

The Regulatory Flexibility Act, 5 U.S.C. 601, requires that Federal agencies take into account how their regulations affect “small entities,” including small businesses, small governmental jurisdictions and small organizations. In order to assess the continuing effect of an agency rule on small entities, The Regulatory Flexibility Act contains a provision in Section 610 that requires Federal agencies to review existing regulations on a periodic basis that had or will have a significant economic impact on a substantial number of small entities.

NMFS recently published a plan for this required period review of regulations in the Federal Register (79 FR 53151, September 8, 2014). This plan stated, “NMFS will conduct reviews in such a way as to ensure that all rules for which a Final Regulatory Flexibility Analysis was prepared are reviewed within 10 years of the year in which they were originally issued. By December 31, 2014, NMFS will review all such rules issued during 2007 and 2008.” Table 5.29 reviews the Atlantic HMS regulations between 2007 and 2008 using the criteria established in Section 610 of the Regulatory Flexibility Act.

Final rules should be reviewed to determine whether they should be continued without change, or whether they should be amended or rescinded, consistent with the stated objectives of applicable statutes. Section 610 of the Regulatory Flexibility Act requires NMFS to consider the following factors when reviewing rules to minimize any significant economic impact of the rule on a substantial number of small entities:

1. The continued need for the rule;
2. The nature of complaints or comments received concerning the rule from the public;

3. The complexity of the rule;
4. The extent to which the rule overlaps, duplicates, or conflicts with other Federal rules, and , to the extent feasible, with State and local government rules; and
5. The length of time since the rule has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the rule.

**Table 5.29 Regulatory Flexibility Act Section 610 Review of Atlantic Highly Migratory Species Regulations between 2005 and 2006**

Name of Action, date, and FR Cite	Atlantic Highly Migratory Species; Atlantic Commercial Shark Management Measures; Gear Operation and Deployment; Complementary Closures. RIN 0648–AT37 (72 FR 5633; February 7, 2007)
Current Status of Rule (Expired, Rescinded, Superseded, Amended, or Continuing)	Continuing
Description of Management Measures and Complexity	NMFS issued a final rule implementing additional handling, release, and disentanglement requirements for sea turtles and other non-target species caught in the commercial shark bottom longline fishery. These requirements increased the amount of handling, release, and disentanglement gear that are required to be on bottom longline (BLL) vessels and were intended to reduce post hooking mortality of sea turtles and other nontarget species consistent with the 2006 Consolidated HMS FMP. This final rule also implemented management measures, consistent with those recommended by the Caribbean Fishery Management Council and implemented by NMFS on October 28, 2005, that prohibit vessels issued HMS permits with bottom longline gear onboard from fishing in six distinct areas off the U.S. Virgin Islands and Puerto Rico, year round. These six closures were intended to minimize adverse impacts to Essential Fish Habitat (EFH) for reef-dwelling species. NMFS considers this rule to be only moderately complex since it just extended current management measures to include additional handling, release and disentanglement requirements, and provided consistency with regional Council measures.
Economic Impacts of Management Measures and Nature of Public Comments	<p>This rule was estimated to have an economic impact of a minimum of \$253 to \$487 for vessels with a freeboard height of four feet (1.22 m) or less. This range represents the range of low-end and high-end priced gears. Larger economic impacts were expected for Atlantic shark fishermen with vessels with freeboard heights greater than four feet (and costs will be dependent on freeboard height due to variable costs of long-handled dehooking gears).</p> <p>Because of the similarities between the PLL and BLL fisheries and the fact</p>

	<p>that many vessel operators and owners fish with both BLL and PLL gear, this final rule enabled Atlantic shark fishermen with BLL gear onboard to follow the protocols and possess the equipment necessary for the PLL fishery, easing determination of compliance for both fishermen and enforcement. This also provided fishermen with the flexibility to change between PLL and BLL gear without additional cost. The final rule also allowed Atlantic shark fishermen with BLL gear onboard to construct additional equipment themselves provided it meets design specifications, to reduce economic impacts. The cost of dehooking gear and time and effort involved in properly dehooking animals may be offset by gaining efficiency in not having to re-rig fishing equipment, and economic gain from retrieving hooks. Such gain could be substantial given the price of circle hooks.</p> <p>Also, the six closures recommended by the Caribbean Fishery Management Council off the U.S. Virgin Islands and Puerto Rico, prohibit HMS permit holders with BLL gear onboard their vessels, from deploying, or fishing with any fishing gear in these closed areas. These closures were expected to have de minimus impacts on HMS permit holders in the Caribbean region.</p> <p>NMFS received several comments regarding the estimated costs of procuring the required dehooking equipment, both to individuals and to the shark BLL industry as a whole, including: NMFS should emphasize that BLL operators could reduce costs of required equipment by making most of the equipment themselves; and a significant portion of the 284 vessels already have PLL permits and already have the equipment, therefore the estimated economic impact associated with the preferred alternative of \$71,900 to \$138,400 seems high. In response, NMFS stated that BLL operators may construct dehooking equipment as long as it meets design standards at 50 CFR 635.21(c) and that it assumed that numerous BLL participants already possess some of the equipment required by this rulemaking which would minimize economic impacts of this final rulemaking. NMFS estimated the number of vessel owners that could potentially be impacted by this rulemaking to be 284. This estimate was derived because 284 of the 555 incidental and directed shark permit holders did not have a directed or incidental swordfish permit. An incidental or directed swordfish permit would be necessary to fish with PLL gear and these vessels would already be required to possess, maintain and utilize the equipment and protocols prescribed in the final rulemaking. NMFS agrees that this may be an overestimate, as it does not account for latent effort in BLL and PLL fisheries. However, whether permit holders had been inactive in the recent past would not exempt them from the need to procure the required equipment before fishing in the future. Finally, a comment was received asking NMFS if they were going to subsidize or pay for the purchase of dehooking equipment. NMFS responded that it did not have any plans to subsidize the purchase of dehooking equipment for</p>
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	participants in the Atlantic shark BLL fishery and that the costs of compliance with this rulemaking could be minimized by fisherman making some of the required equipment themselves, provided it meets the design standards in 50 CFR 635.21(c).
Overlap with other State or Federal Rules	This final rule does not duplicate, overlap, or conflict with any other Federal rules.
Changes in Technology, Economic Conditions, or Other Factors since Last Evaluation	NMFS is continuing to investigate new gears and technologies to reduce sea turtle interactions and mortalities and has recommended their use, as appropriate, to fishermen. NMFS is not aware of any significant change in the costs associated with acquiring the disentanglement equipment. Since 2006, there has been a steady decline in commercial shark fishery revenues, which largely use BLL gear, from \$6.6 million in 2006 to \$2.1 million in 2013, but this decline in revenues is mainly attributable to other state and federal management measures designed to address overfishing of several shark species. This overall decline in fishing activity, including a decline in the number of BLL vessels participating in the fishery, has likely adversely impacted the economic conditions of these small businesses.
Recommendation to Continue, Rescind, or Amend and Rationale	This rule is continuing and needed to minimize sea turtle and other non-target mortality associated with shark bottom longline fishing. It is also need to implement measures that are complementary to Caribbean Fishery Management Council recommended closure measures.
Name of Action, date, and FR Cite	Atlantic HMS; U.S. Atlantic Swordfish Fishery Management Measures. RIN 0648–AU86 (72 FR 31688, June 7, 2007)
Current Status of Rule (Expired, Rescinded, Superseded, Amended, or Continuing)	Continuing
Description of Management Measures and Complexity	NMFS issued a final rule to amend regulations governing the North Atlantic swordfish fishery to provide additional opportunities for U.S. vessels to more fully utilize the U.S. North Atlantic swordfish quota, in recognition of the improved stock status of the species. The U.S. North Atlantic swordfish quota is derived from ICCAT recommendations and is implemented under the authority of the MSA and ATCA. For several years prior to the rule, the United States did not fully harvest its available North Atlantic swordfish quota. This final rule increased swordfish retention limits for Incidental swordfish permit holders, and modified recreational swordfish retention limits for HMS Charter/Headboat and Angling category permit holders. It also modified HMS limited access vessel

	<p>upgrading restrictions for vessels concurrently issued certain HMS permits. These actions were necessary to address persistent under-harvest of the domestic North Atlantic swordfish quota, while continuing to minimize bycatch to the extent practicable, so that swordfish are harvested in a sustainable, yet economically viable manner. NMFS considers that this was a moderate to low complexity rule given that it just adjusted retention limits and eased upgrading restrictions.</p>
<p>Economic Impacts of Management Measures and Nature of Public Comments</p>	<p>This action increased the North Atlantic swordfish retention limit for vessels issued valid Incidental swordfish limited access permits to 30 fish per vessel per trip; and for vessels issued valid Incidental swordfish limited access permits that participate in the squid trawl fishery, increased the limit to 15 fish per vessel per trip. This rule provides an opportunity for Incidental swordfish permit holders to land swordfish that might otherwise be discarded, but prevents a large increase in additional directed fishing effort on swordfish. As many as 52 swordfish had been reported discarded on a single trip by Incidental swordfish permit holders, although most trips reported few discards. A 30 fish limit is just below the median number of swordfish that had been landed by Directed swordfish permit holders from 2002 - 2005 (36 fish).</p> <p>The economic benefits associated with this rule were estimated by taking the difference between the value of two swordfish and the value of 30 swordfish. Using the mean weight of swordfish landed in 2005 of 75.7 lb and the mean ex-vessel price of \$3.71 per lb in 2005, the estimated value of potentially retaining an additional 28 swordfish under this alternative is \$7,864 per vessel per trip. Using logbook records from 2005, it was projected that total annual landings of swordfish could increase from 10,787 to 34,879 lb, if all reported discards were converted to landings, up to 30 fish. Using the average ex-vessel price of \$3.71 per lb for 2005, the estimated total value of these additional landings would be \$89,381 amongst all active Incidental swordfish vessels per year.</p> <p>This rule also increased the swordfish retention limit from 5 to 15 swordfish for vessels issued valid Incidental swordfish limited access permits that participate in the squid trawl fishery. This tripled the current retention limit for these vessels. From 1998 to 2004, all squid trawl vessels landed an average of 6.3 mt (ww) of swordfish in total per year. Increasing the limit for squid trawl vessels by an additional ten swordfish per trip could potentially increase annual landings by all squid trawl vessels to 18.9 mt (ww) in total per year. This increase of 12.6 mt (ww) of swordfish would be worth a total of \$77,487 per year among all squid trawl vessels, based on the same prices and ratios discussed above.</p> <p>This rule also implemented a North Atlantic swordfish retention limit for HMS Charter/headboat vessels of one fish per paying passenger, up to six swordfish per trip for charter vessels and 15 swordfish per trip for headboat</p>

	<p>vessels. This would maintain the current recreational limit of one swordfish per person, but increase the allowable upper retention limit from three to six fish for charter vessels, or from three fish to fifteen fish for headboat vessels. A six-fish upper vessel retention limit for charter vessels was selected for this sector, because these vessels are licensed to carry a maximum of six passengers per trip. Although headboats can carry upwards of 50 passengers, a 15-fish retention limit was analyzed because it would provide a better opportunity for anglers on headboats to land a swordfish, while maintaining a recreational aspect to the charter/headboat fishery. In addition, given the lack of data for swordfish retention by anglers, a 15 fish limit would still preclude potential negative effects on the swordfish stock.</p> <p>In 2005, approximately 25 percent of the swordfish reported landed by Charter/headboat vessels in the HMS non-tournament recreational reporting database were in groups of three fish on the same date. Even though a quarter of the trips may have been limited in the amount of swordfish retained under the existing vessel trip limit, the benefits of raising the limit could extend beyond those trips. The economic benefits would result from additional bookings of charter trips, because the perceived value of a trip for an angler may be increased by the ability to land more fish. The 2004 average daily HMS charterboat rate for day trips was \$1,053. The willingness-to-pay for swordfish charter trips is likely to be much higher than this value. Increased charter and headboat bookings could lead to positive economic multiplier impacts to tackle shops, boat dealers, hotels, fuel suppliers, and other associated local and regional businesses.</p> <p>This rule also implemented a North Atlantic swordfish recreational retention limit for HMS Angling category vessels of one fish per person per trip, up to four swordfish per vessel per trip. This alternative maintained the then-existing recreational limit of one swordfish per person, but increased the upper retention limit from three fish to four fish per vessel per trip. A four-fish upper vessel retention limit for angling vessels was selected because it would provide a modest increase in the opportunity to land a swordfish, while maintaining a recreational aspect to the fishery. Because there were 25,238 vessels issued HMS Angling category permits as of February 1, 2006, an increase in the upper retention limit of more than one fish per person on an angling vessel was considered, but rejected, due to concerns about potentially excessive recreational landings. This provision of the rule provides a reasonable opportunity for recreational anglers to land swordfish, and may increase U.S. swordfish landings.</p> <p>Approximately seven percent of the swordfish reported landed by Angling category vessels in the HMS non-tournament recreational reporting database were in groups of three fish on the same day. Therefore, the increase from three to four swordfish per vessel per trip under this</p>
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	<p>alternative would likely affect a similar percentage of trips. The economic benefit of this alternative would derive from an increased perceived value of a recreational angling trip, due to the ability to land more fish. Recreational anglers might take more trips, which could lead to some multiplier benefits to tackle shops, boat dealers, hotels, fuel suppliers, and other related businesses. The average expenditure on HMS related trips is estimated to be \$122 per person per day based on the recreational fishing expenditure survey add-on to the NMFS' Marine Recreational Fisheries Statistical Survey (MRFSS). The expenditure data include the costs of tackle, food, lodging, bait, ice, boat, fuel, processing, transportation, party/charter fees, access/boat launching, and equipment rental.</p> <p>This rule also established new HMS limited access vessel upgrading and permit transfer upgrading restrictions only for HMS vessels that are authorized to fish with pelagic longline gear for swordfish and tunas (i.e., vessels that concurrently possess Directed or Incidental shark and swordfish permits, and an Atlantic Tunas Longline category permit), equivalent to 35 percent length overall (LOA), gross register tonnage (GRT), and net tonnage (NT), as measured relative to the baseline vessel specifications (i.e., the specifications of the vessel first issued an HMS limited access permit), and remove horsepower upgrading and permit transfer upgrading restrictions for these vessels. This rule was expected to improve the ability of U.S. vessels to fully harvest the domestic ICCAT-recommended swordfish quota, but imposed some limits on vessel upgrading by restricting the universe of potentially impacted entities to certain vessels only, and by limiting the magnitude of allowable upgrades.</p> <p>For an "average" 55-foot swordfish vessel, this rule was expected to result in upgrading the permits to vessels between 69 and 74 feet vessel, depending upon whether a vessel has already been upgraded. It was also considered possible that all eligible vessels could be upgraded to increase in size by 25 to 35 percent or, conversely, none of the eligible vessels would be upgraded. Eligible vessel owners would gain the economic benefits associated with having increased operational flexibility to adjust vessel configurations in terms of length and horsepower to best fit their business needs. However, that flexibility would be capped by imposing a 35 percent limit on increases in vessel length, gross tonnage, and net tonnage.</p> <p>A comment was received expressing concern that increasing the Incidental swordfish retention limit would put more swordfish on the market, and therefore have negative economic consequences by reducing the price that Directed swordfish permit holders receive for their swordfish. NMFS recognized that an increase in the volume of incidentally-caught swordfish could impact swordfish prices received by all permit holders. However, some constituents had indicated to NMFS that the 2-fish Incidental retention limit does not justify the additional effort and costs of fishing for,</p>
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	<p>or landing, swordfish, and then bringing it to market. These constituents stated that the 2-fish Incidental retention limit has contributed to an inadequate infrastructure and marketing channel in some areas that is not suitable for handling swordfish. In response, NMFS stated that a 30-fish retention limit should provide more of an incentive to land and market incidentally-caught swordfish, without a significant disruption to swordfish prices. NMFS also responded that increased participation by Incidental swordfish permit holders could help to develop a more consistent supply of swordfish, and thus lead to a more robust market for swordfish products, and help to stabilize prices.</p> <p>NMFS also received public comment regarding the availability of capital to pay for vessel upgrading. There was concern that relaxing the vessel upgrading restrictions would not revitalize the swordfish fishery, because many fishermen could not afford to upgrade their vessels, or were unable to obtain loans for vessel upgrades. However, other constituents identified the current vessel upgrading restrictions as one factor, among several, that is limiting the ability of the U.S. vessels to more fully harvest the U.S. swordfish quota. NMFS recognizes that each business is unique. Some vessel owners may choose to upgrade their vessels, whereas others will not. Owners are not required to upgrade vessels under this final rule. The option to upgrade could improve the flexibility of some vessel owners to make individual business decisions, based upon their unique circumstances. This could result in larger, more modern, U.S. swordfish vessels, and increased swordfish landings.</p> <p>Finally, some commenters indicated that a 35 percent upgrade in vessel size was not sufficient for their business purposes. NMFS responded that a 35 percent increase in vessel size, which would allow an "average" 55-foot vessel to be upgraded to a 69 to 74-foot vessel depending upon whether a vessel has already been upgraded by 10 percent, is a meaningful increase in vessel size. There were approximately 50 vessels greater than 70 feet in length that would qualify for the new upgrading provisions. These vessels could be upgraded to more than 90 feet in length and possibly be converted to freezer vessels, upgrades which some commenters suggested are necessary. NMFS believes it is important to keep fleet capacity commensurate with resource abundance to ensure the sustainability of the swordfish fishery. Until additional analysis is completed and other logistical issues are resolved, NMFS believes that it is necessary to keep overall fleet capacity within some limits.</p>
Overlap with other State or Federal Rules	This final rule does not duplicate, overlap, or conflict with any other Federal rules.
Changes in Technology,	The major technological change since 2007 in the swordfish fishery has been the increased use of buoy gear (authorized for use in 2006) to target

Economic Conditions, or Other Factors since Last Evaluation	<p>swordfish and the use of deep drop rigs to target swordfish during daytime. Economic conditions in the commercial swordfish fishery have improved significantly since 2007. In 2007, revenues for Atlantic swordfish totaled \$14.5 million based on 3.6 million pounds of harvest and have climbed to a high of \$24.5 million in 2012 based on 5.6 million pounds of harvest. At the individual business level, this increase in revenue has likely improved the ability of these small businesses to adjust to regulatory changes. Other actions that have occurred since this rule include a change in the swordfish minimum size (77 FR 45273; July 31, 2012) and the finalization of Amendment 4 (77 FR 59842; October 1, 2012), which created an open access HMS Commercial Caribbean Small Boat permit valid only in the U.S. Caribbean to allow harvest of swordfish, BAYS (bigeye, albacore, yellowfin, and skipjack) tunas, and shark with handgears and greenstick gear. Also, NMFS finalized Amendment 8 (78 FR 52012; August 21, 2013) which created an open access Swordfish General Commercial permit to allow harvest of swordfish with handgears (except buoy gear) and greenstick.</p>
Recommendation to Continue, Rescind, or Amend and Rationale	<p>This rule is continuing and needed to provide additional opportunities for U.S. vessels to more fully utilize the U.S. North Atlantic swordfish quota, in recognition of the improved stock status of the species. This action is necessary to implement recommendations of ICCAT, as required by ATCA.</p>
Name of Action, date, and FR Cite	<p>Atlantic Highly Migratory Species; Atlantic Swordfish Quotas. RIN 0648–AV10 (72 FR 56929; October 5, 2007)</p>
Current Status of Rule (Expired, Rescinded, Superseded, Amended, or Continuing)	<p>Continuing with parts amended.</p>
Description of Management Measures and Complexity	<p>This final rule amended the regulations governing the North and South Atlantic swordfish fisheries to implement two recommendations by the International Commission for the Conservation of Atlantic Tuna (Recommendations 06–02 and 06–03). These recommendations established baseline quotas for North and South Atlantic swordfish, respectively, and set caps on underharvest carryover. Additionally, recommendation 06–02 allows a contracting party (CPC) with a total allowable catch allocation to make a transfer within a fishing year of up to 15 percent of its baseline allocation to other CPCs with total allowable catch allocations, as long as the transfer is conducted in a manner that is consistent with domestic obligations and conservation considerations. This final rule transferred 15 percent of the North Atlantic swordfish baseline quota into the reserve category, which allows it to be transferred to other CPCs with total</p>

	<p>allowable catch allocations. In addition, this final rule modified the North and South Atlantic swordfish quotas for the 2006 fishing year to account for updated landings information from the 2004 and 2005 fishing years. Finally, this final rule included the option of a website as an additional method for complying with the Atlantic HMS Angling or Atlantic HMS Charter/Headboat category's 24-hour reporting requirement. Reporting previously was done by telephone only. NMFS considers that this was a moderately complex rule given that it deals with the implementation of an international agreement that some fishery participants might be unfamiliar with and it updated some recreational reporting requirements.</p>
Economic Impacts of Management Measures and Nature of Public Comments	<p>This rule implemented North and South Atlantic swordfish quotas and underharvest provisions as outlined in ICCAT Recommendations 06-02 and 06-03. North Atlantic underharvest carryover was capped at 50 percent of the 2007 and 2008 baseline quota allocations (1,468.8 mt dw). South Atlantic underharvest carryover was capped at 100 percent of the 2007 and 2008 baseline quota allocations (75.2 mt dw) and South Atlantic underharvest carryover would be capped at 100 mt ww (75.2 mt dw). In addition, this rule allowed for 2,022.56 mt dw of the U.S. 2005 North Atlantic underharvest to be redistributed among other CPCs in 2007 (1,011.28 mt dw) and 2008 (1,011.28 mt dw), consistent with ICCAT recommendation 06-02.</p> <p>By applying caps and baseline quotas in ICCAT Recommendations 06-02 and 06-03 for 2007, prices for fully realized quota harvests were calculated to estimate economic impacts. This rule was estimated to have the potential to result in a loss of \$45.3 million for the North Atlantic swordfish fishery in 2007 if harvests were fully realized and \$0.14 million for the South Atlantic swordfish fishery in 2007 if harvests were fully realized. However, baseline quotas for the North and South Atlantic had not been fully realized during that time period. The pelagic longline fleet has not caught the entire U.S. swordfish quota, causing significant amounts of swordfish quota to be carried over in past fishing years. For example, the amount of total underharvest in the North Atlantic during years 2004-2006 was 3,528.8 mt dw, 4,806.1 mt dw, and 6,905.9 mt dw, respectively. In the years just before 2007, there had been no landings of swordfish in the South Atlantic. A reduction in the growth of underharvest carryovers, and the June 7, 2007, final rule (72 FR 31688) to help revitalize the swordfish industry, would increase the ability of the vessel owners and permit holders in the pelagic longline fleet to catch their full quota. In conclusion, maintaining the North Atlantic baseline quota, decreasing the South Atlantic baseline quota, and capping underharvest carryovers in both swordfish fisheries was not expected to have adverse impacts on a large number of small entities.</p> <p>The rule also transferred 15 percent (440.6 mt dw) of the 2007 baseline U.S. North Atlantic swordfish allocation to the reserve category. This</p>

	<p>replenished the reserve and made it available for its four stated uses.</p> <p>The rule also replenished a reserve that would otherwise have become depleted in future fishing years through the annual 18.8 mt dw transfer to Canada. This creates four options (previously mentioned) for use of the 15 percent (440.6 mt dw) allocated reserve quota. Placing 15 percent of the 2007 and 2008 baseline quota directly into the reserve would provide for a directed fishery quota that would not be reduced due to an in-season transfer, as well as provide opportunity to cover other U.S. North Atlantic swordfish quota categories should the situation arise.</p> <p>Transferring 15 percent of the U.S. baseline quota to the reserve amounts to 3,601.9 mt dw for the North Atlantic directed swordfish fishery and 504.5 mt dw for the reserve during the 2007 fishing year. If this transfer was not implemented, the North Atlantic directed swordfish fishery would have a larger quota of 4,042.5 mt dw and a smaller reserve of 63.9 mt dw. The implementation of the transfer would therefore result in a potential loss in revenue of \$3.7 million to the North Atlantic directed swordfish fishery when compared to the status quo. However, NMFS did not expect fishing effort to increase in the short term to the extent that this loss would be realized. U.S. fishermen have not caught their full swordfish quota since 2000, resulting in large underharvest carryovers which, in turn, made for large adjusted quotas. Therefore, NMFS believed that the caps, and the June 7, 2007, final rule (72 FR 31688) to revitalize the swordfish industry, would help the fishery harvest the swordfish quota without the large carryovers which have occurred in the past. Furthermore, as previously stated, one of the four possible uses of the reserve would be to transfer quota back to the directed swordfish category if needed, which may also prevent this potential economic loss from being realized.</p> <p>NMFS did not receive any comments specific to the IRFA or the economic impacts of the proposed alternatives.</p>
Overlap with other State or Federal Rules	This final rule does not duplicate, overlap, or conflict with any other Federal rules.
Changes in Technology, Economic Conditions, or Other Factors since Last Evaluation	<p>Since this rule was published, scientific research identified roundscale spearfish as a separate species of billfish. This required an amendment to this rule's recreational reporting requirements for the Atlantic HMS Angling and Atlantic HMS Charter/Headboat category. The 2010 Atlantic Billfish Management, White Marline, Roundscale Spearfish rule (75 FR 57698) amended the reporting requirements to include roundscale spearfish.</p> <p>Economic conditions in the commercial swordfish fishery have improved significantly since 2007. In 2007, revenues for Atlantic swordfish totaled \$14.5 million based on 3.6 million pounds of harvest and have climbed to a</p>



	high of \$24.5 million in 2012 based on 5.6 million pounds of harvest. At the individual business level, this increase in revenue has likely improved the ability of these small businesses to adjust to regulatory changes.
Recommendation to Continue, Rescind, or Amend and Rationale	This rule is continuing as amended and needed to implement recommendations of ICCAT, as required by ATCA, and to maintain consistency with the national standards of the Magnuson-Stevens Act.
Name of Action, date, and FR Cite	International Fisheries; Atlantic Highly Migratory Species; International Trade Permit Program; Bluefin Tuna Catch Documentation Program. RIN 0648–AU88 (73 FR 31380; June 2, 2008)
Current Status of Rule (Expired, Rescinded, Superseded, Amended, or Continuing)	Continuing as amended
Description of Management Measures and Complexity	NMFS modified permitting and reporting requirements for the HMS International Trade Permit (ITP) program to improve program efficacy and enforceability, and implement the ICCAT Bluefin tuna catch documentation (BCD) program. The modified regulations also implemented the new definition of “import” contained in the Magnuson-Stevens Act, and required that shark fin importers, exporters, and reexporters obtain the HMS ITP to assist NMFS in monitoring trade of shark fins. This action was necessary to implement recommendations of ICCAT, as required by ATCA, and to achieve domestic management objectives under the Magnuson-Stevens Act. NMFS considers that this was a moderately complex rule given that it dealt with the implementation of an international agreement and that it deals with import and export reporting requirements.
Economic Impacts of Management Measures and Nature of Public Comments	<p>The rule continues to require the consignee as indicated in Customs and Border Protection (CBP) import documentation to be the responsible party for obtaining the HMS ITP. The annual costs associated with this action are the costs associated with permitting (including the cost of the permit, mailing costs and time for filling out the application – estimated at \$26.75 per applicant) and the cost of reporting (including filling out and submitting the report forms – estimated at \$102 per dealer for biweekly reports and \$94 per dealer for trade tracking documentation, for a total of \$196 per dealer).</p> <p>The final action required that shark fin traders obtain an HMS ITP. NMFS anticipated that approximately 100 entities are expected to require the HMS ITP for shark fin trading. Since there were no reporting requirements</p>

	<p>associated with this permit, the only annual costs are for obtaining the permit (\$26.75 per dealer).</p> <p>The second category of issues addressed in the final rule is under the heading of “Reporting.” None of the alternatives for these issues would change the number of entities required to obtain an HMS ITP, so there would be no permitting-related costs for any of these issues.</p> <p>The final action also adjusted HMS ITP and Atlantic Tunas Dealer Permit (ATDP) reporting regulations to use a “received-by” date rather than a postmark date for determining dealer compliance with required report submittal schedules. The HMS ITP regulations were clarified to indicate when use of a fax machine would be an acceptable method for submitting a report. This alternative was chosen because it establishes consistency within HMS regulations by using the “received-by” date to ensure NMFS received the report by a date certain, and provides for all report submission alternatives, including faxes. The final rule also retained the 24- hour reporting requirement for enforcement purposes, which was expected to have no economic consequences, since it would not impact reporting frequency.</p> <p>The second reporting-related issue considered alternatives to initially implement ICCAT Recommendation 07–10 and the new BCD program. The final action implemented the program for commercial U.S. Atlantic bluefin tuna fisheries and bluefin tuna imports, exports and re-exports as part of a program that will apply to all ICCAT member nations. The BCD program required the use of new forms with fields similar to the ICCAT bluefin tuna statistical document that was in place before the BCD program was implemented. The change in reporting burden only affected HMS ITP holders that re-export untagged bluefin tuna. When re-exporting an untagged bluefin tuna, the HMS ITP holder is required to send a copy of the re-export certificate to the ICCAT Secretariat and importing nation within five working days via addresses and information provided by NMFS. The costs per transaction could range from zero for electronic transmission of the documents, to approximately \$100 for mailing, for an average of \$50 per transaction. In 2006, 17 consignments would have been subject to this additional cost. In addition, a time burden of .25 hours per consignment would have resulted in an additional 4.25 aggregate hours for a total annual cost of \$64, or \$3.75 per transaction.</p> <p>The last issue under this category addressed reporting of Atlantic bluefin tuna exports. The final action provided a positive economic impact, reducing the current reporting burden for individuals who hold both an Atlantic Tunas Directed Permit (ATDP) and HMS ITP by clarifying that bluefin tuna exports would only need to be reported on one biweekly report. This provision ensured the reporting burden for export of domestically landed Atlantic bluefin tuna would not be duplicative with</p>
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	<p>landing reporting requirements. This action would positively affect the 64 individuals who concurrently held an ATDP and HMS ITP and could save an estimated \$51 per dealer per year. In addition, the final action could reduce the reporting burden for HMS ITP holders who purchase bluefin tuna from an ATDP holder, with an estimated savings similar to those for individuals holding both permits. The last issue considered in this final rule that could have economic impacts addressed the verification of foreign validating officials for imports. NMFS stated it would pursue further international coordination on this issue, and there would be no economic related consequences. This alternative was selected to mitigate reporting burden for U.S. businesses and further coordinate international action for this issue.</p> <p>NMFS received a comment that stated that U.S. bluefin tuna re-exporters are assigned an unfair reporting burden for re-export of untagged bluefin tuna relative to the bluefin tuna trade industry in other nations. The commenter stated that the United States is one of the few countries that tags every exported fish, which results in a reduced burden for re-exporters in other nations, and that the U.S. industry carries more reporting burden than industry members in other countries. NMFS notes that the final rule requires that re-exporters of untagged bluefin tuna provide copies of completed re-export certificates and associated documentation to the ICCAT Secretariat and competent authorities of importing nations at provided addresses. NMFS included this requirement since ICCAT Recommendation 07–10 specifically requires all nations, including the United States, to conduct such reporting. However, the United States’ sophisticated catch monitoring program, which includes tagging exempts U.S. industry members from certain other parts of the ICCAT Recommendation 07–10 BCD program. NMFS will continue to work with ICCAT to balance the burden of international fisheries management fairly among participating nations. Overall, the reporting requirements of the ICCAT BCD program that must be implemented by the United States have been mitigated and reduced because of the U.S. programs currently in place.</p>
Overlap with other State or Federal Rules	This final rule does not duplicate, overlap, or conflict with any other Federal rules.
Changes in Technology, Economic Conditions, or Other Factors since Last Evaluation	Technological improvements have been made to the BCD program. An electronic Bluefin Catch Documentation (eBCD) scheme in development is being tested.
Recommendation to Continue,	This rule is continuing as amended for minor regulatory clarification and needed to implement recommendations of ICCAT, as required by ATCA,

Rescind, or Amend and Rationale	and to maintain consistency with the national standards of the Magnuson-Stevens Act. NMFS will likely revisit some of these rule provisions when a regulatory package is developed soon to implement the ICCAT eBCD system.
Name of Action, date, and FR Cite	Atlantic Highly Migratory Species; Atlantic Shark Management Measures. 0648–AU89 (73 FR 35778; June 24, 2008)
Current Status of Rule (Expired, Rescinded, Superseded, Amended, or Continuing)	Amended
Description of Management Measures and Complexity	This final rule implemented the management measures described in Final Amendment 2 to the Atlantic HMS FMP. These management measures were designed to rebuild overfished species and prevent overfishing of Atlantic sharks. These measures include, but are not limited to, reductions in the commercial quotas, adjustments to commercial retention limits, establishment of a shark research fishery, a requirement for commercial vessels to maintain all fins on the shark carcasses through offloading, the establishment of two regional quotas for non-sandbar large coastal sharks, the establishment of one annual season for commercial shark fishing instead of trimesters, changes in reporting requirements for dealers (including swordfish and tuna dealers), the establishment of additional time/area closures for bottom longline fisheries, and changes to the authorized species for recreational fisheries. This rule also established the 2008 commercial quota for all Atlantic shark species groups. These changes affected all commercial and recreational shark fishermen and shark dealers on the Atlantic Coast. NMFS considers that this was a complex rule given that it was a major amendment to the fishery management plan with many provisions.
Economic Impacts of Management Measures and Nature of Public Comments	Amendment 2 to the 2006 Consolidated HMS FMP established a program where vessels with directed or incidental shark permits could participate in a small research fishery for sandbar sharks that would harvest the entire 116.6 mt dw sandbar quota. There would be 100 percent observer coverage on each research vessel, and only vessels participating in this program could land sandbar sharks. Vessels not participating in the research program could land non-sandbar LCS, SCS, and pelagic sharks. It was estimated that vessels in the shark research fishery could make \$437,963 in gross revenues of sandbar and non-sandbar LCS landings under the adjusted quota. Since 5 to 10 vessels were anticipated to participate in the research fishery, NMFS estimated that an individual vessel could make between \$87,593 (i.e., 5 boats) to \$43,796 (i.e., 10 boats) in gross revenues on sandbar shark and non-sandbar LCS landings. However, the vessels

	<p>operating outside of the research fishery would have a lower adjusted regional non-sandbar LCS base quota of 187.8 mt dw in the Atlantic region and 390.5 mt dw in the Gulf of Mexico region. In 2006 ex-vessel prices, this is equivalent to \$516,285 in the Atlantic region and \$1,273,269 in gross revenues in the Gulf of Mexico region. Divided by the remaining vessels it was estimated that the average gross revenues from shark per vessel would be just over \$2,000 per trip.</p> <p>NMFS received a comment that NMFS should consider an alternative suite that incorporates a “phase out” of the commercial shark industry. NMFS did consider such an alternative in the Draft EIS that would have ended Atlantic commercial shark fishing, Alternative Suite 5. Under this alternative, shark landings would have been limited to research and the collection for public display via the HMS Exempted Fishing Program. Recreational fisheries would have been catch and release only. However, after careful consideration of the other alternatives, this alternative suite was not preferred due to the economic costs associated with a complete closure as discussed in Chapter 6 of Amendment 2 to the Consolidated HMS FMP.</p> <p>NMFS received several comments regarding an industry buyout/buyback. NMFS recognizes that some participants of the Atlantic shark fishery expressed interest in reducing fishing capacity for sharks via some form of buyout program. Buyouts can occur via one of three mechanisms, including: through an industry fee, via appropriations from the United States Congress, and/or with funds provided from any State or other public sources or private or non-profit organization. A buyout plan is not proposed in this rulemaking, despite requests for consideration from the HMS Advisory Panel and other affected constituents, because NMFS is unable to independently implement a buyout as a management option. Buyouts must be initiated via one of the aforementioned mechanisms. The shark fishery did develop an industry “business plan” that examined options for a buyout, which is further described in Chapter 1 of the Draft Amendment 2 to the Consolidated HMS FMP.</p> <p>NMFS received several comments concerning the potential for severe economic impacts associated with all of the alternatives considered (other than status quo). Comments indicated a concern that many fishermen may not be able to survive economically until the next stock assessment. NMFS estimated that the alternatives considered, including the no action alternative, would result in economic consequences to the shark fishery. The dealers already handle small quantities of shark products, and therefore, changes in the shark fishery are unlikely to cause them to change their business practices. Reduced domestic harvest of sandbar sharks could potentially increase the value of shark product in the future due to reduced supplies. Furthermore, having the season open for a longer period of time each year, subject to reduced retention limits, may enhance the domestic</p>
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	<p>shark meat market and increase prices.</p> <p>Several comments suggested NMFS should implement a retraining program for fishermen and families that are displaced by this action. Others suggested that fishermen reconfigure their businesses towards providing tourism services. NMFS has worked with a number of other agencies/ departments to explore programs that are available to fishermen and other businesses affected by fishery management measures. Some of these include retraining programs and financial assistance and would mitigate some of the economic impacts of this rule. These programs are further discussed in response to comments provided above.</p> <p>Commenters also suggested that NMFS consider giving shark fishermen swordfish handgear permits in order to help offset negative economic impacts, while also increasing swordfish landings. NMFS did not propose changes to the permit system pursuant to the rulemaking; however, NMFS will take this suggestion under consideration for future actions. NMFS notes that the swordfish handgear permit is a limited access permit. Therefore, issuing new swordfish handgear permits may result in negative economic impacts to current holders of swordfish handgear permits. In addition, NMFS has taken several actions in recent years to revitalize the swordfish fishery and may consider additional measures in the future as appropriate.</p> <p>NMFS received a comment questioning whether shark permits will still have any value after the proposed management changes take place. It is difficult to predict the value of shark directed and incidental permits before management measures associated with this Amendment are implemented. It is likely that the value of shark permits may decrease as a result of quota reductions and reduced retention limits. However, there will still be some demand for shark permits by new entrants into the commercial swordfish and tuna fisheries who will need all three HMS permits to fish.</p>
Overlap with other State or Federal Rules	This final rule does not duplicate, overlap, or conflict with any other Federal rules.
Changes in Technology, Economic Conditions, or Other Factors since Last Evaluation	<p>Since 2006, there has been a steady decline in commercial shark fishery revenues from \$6.6 million in 2006 to \$2.1 million in 2013. This decline in revenues is mainly attributable to state and federal management measures designed to address overfishing of several shark species. This decline in overall shark revenues has had negative economic impacts on small businesses that rely on commercial shark fishing. Since 2006, there have also been a number of shark stock assessments (including but not limited to assessments for sandbar, dusky, blacknose, and blacktip sharks), resulting in the need for additional regulations.</p>

Recommendation to Continue, Rescind, or Amend and Rationale	Some portions of this rule were amended by NMFS in Amendment 5a (2013). In addition, current work on developing Amendment 6 will also likely amend provisions of this rule. Potential adjustments include changes to the quotas based on recent assessments and changes to the trip limits. These changes would not change the overall structure established in this 2008 rulemaking.
Name of Action, date, and FR Cite	Atlantic Highly Migratory Species; Renewal of Atlantic Tunas Longline Limited Access Permits; Atlantic Shark Dealer Workshop Attendance Requirements. 0648–AW46 (73 FR 38144; July 3, 2008)
Current Status of Rule (Expired, Rescinded, Superseded, Amended, or Continuing)	Continuing
Description of Management Measures and Complexity	This final rule amended the regulations governing the renewal of Atlantic tunas longline limited access permits (LAPs), and amended the workshop attendance requirements for businesses issued Atlantic shark dealer permits. Specifically, the regulatory changes allowed for the renewal of Atlantic tunas longline LAPs that have been expired for more than one year by the most recent permit holder of record, provided that the applicant has been issued a swordfish LAP (other than a handgear LAP) and a shark LAP, and all other requirements for permit renewal are met. Also, this rule amended the Atlantic Shark Identification Workshop requirements by: specifying that a workshop certificate be submitted upon permit renewal, and later possessed and available for inspection, for each place of business listed on the dealer permit which first receives Atlantic sharks by way of purchase, barter, or trade (rather than for each location listed on their dealer permit); and required that extensions of a dealer's business, such as trucks or other conveyances, must possess a copy of a valid dealer or proxy certificate issued to a place of business listed on the dealer permit. Since this regulation only made changes to the renewal of permits, workshop attendance requirements NMFS determined that it was a relatively low complexity rule.
Economic Impacts of Management Measures and Nature of Public Comments	Removing the one-year renewal timeframe for Atlantic tunas longline LAPs was projected to potentially increase net and gross revenues for approximately 40 vessel owners who are otherwise qualified to fish for swordfish and tunas with PLL gear, except that they are currently ineligible to renew their Atlantic tunas longline LAP. Overall fleet-wide gross economic benefits could potentially increase as much as \$7,842,280, relative to the baseline. Also, an overall fleet-wide increase in net revenues (profits) of approximately \$200,000 to \$721,839 could occur, distributed among the 40 vessels potentially impacted by this action. Under this action,

	<p>each individual vessel owner could see an increase in annual net revenues ranging from \$0 to potentially over \$100,000, depending upon the profitability of their business. Another important benefit is that it could help to maintain the domestic swordfish and tuna PLL fishery at historical levels by allowing 35 – 40 vessels to participate in the fishery that, since September 2007, have not been permitted to do so.</p> <p>All of the potentially affected vessels/permit holders originally qualified for the longline fishery in 1999, or received the necessary permits through transfer. Thus, relative to August 2007 and years prior, there would be no change in historical fishing practices, fishing effort, or economic impact. However, relative to September 2007 and beyond, potential economic benefits to the affected permit holders would result.</p> <p>The final rule could also help the United States retain its historic swordfish quota allocation at ICCAT and sustain employment opportunities in the domestic PLL fleet. Maintaining a viable domestic PLL fishery is important because it could help to demonstrate that a well-managed, environmentally-sound fishery can also be profitable. This could eventually provide an incentive for other nations to adopt similar management measures that are currently required of the U.S. PLL fleet such as circle hooks, careful release gears, and other measures described in the response to the comment above.</p> <p>A related potential impact associated with this action included changes to the value of an Atlantic tunas longline permit. The final rule was expected to initially increase the supply relative to the period since September 2007, and thereby reduce the value. These impacts would be either positive or negative for small business entities, depending upon whether the Atlantic tunas longline LAP was being bought or sold.</p> <p>The final action for Atlantic Shark Identification Workshop attendance requirements (preferred alternative 2.2.2 in the FRFA) specified that, upon permit renewal, a dealer must submit an Atlantic Shark Identification Workshop certificate (dealer or proxy) for each place of business listed on the dealer permit which first receives Atlantic sharks by way of purchase, barter, or trade, rather than from each location listed on their dealer permit. The requirement to possess, and make available for inspection, an Atlantic Shark Identification Workshop certificate is similarly only required at locations listed on the dealer permit where sharks are first received. This eliminates the need for a dealer to send a proxy to a workshop to obtain a certificate for a business location that does not first receive Atlantic shark products.</p> <p>As mentioned above, there are currently 41 shark dealers with multiple locations listed on their permit which could be impacted by this action. Of these, 8 Atlantic shark dealers have not currently been issued Atlantic</p>
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	<p>Shark Identification Workshop certificates for all of the locations listed on their permit. NMFS estimates that the total costs (travel costs and opportunity costs) associated with the selected alternative for Atlantic Shark Identification Workshop attendance requirements will be lower than those associated with the no action alternative, but only for Atlantic shark dealers that: (1) opt to send a proxy (or proxies) to the workshop; (2) have multiple locations listed on their permit; and, (3) only first receive shark products at some of the locations listed on their Atlantic shark dealer permit. Costs will remain unchanged for shark dealers that do not meet these three criteria.</p> <p>The final rule for Atlantic Shark Identification Workshop attendance requirements (preferred alternative 2.2.2 in the FRFA) specifies that, upon permit renewal, a dealer must submit an Atlantic Shark Identification Workshop certificate (dealer or proxy) for each place of business listed on the dealer permit which first receives Atlantic sharks by way of purchase, barter, or trade, rather than from each location listed on their dealer permit. The requirement to possess, and make available for inspection, an Atlantic Shark Identification Workshop certificate is similarly only required at locations listed on the dealer permit where sharks are first received. This eliminates the need for a dealer to send a proxy to a workshop to obtain a certificate for a business location that does not first receive Atlantic shark products.</p> <p>NMFS received comments that the final action could provide some economic benefits to fishery participants and reduce regulatory discards. NMFS concurs with this assessment that the final action could provide an economic benefit to some former permit holders, and reduce or eliminate swordfish regulatory discards by allowing squid trawlers to retain incidentally-caught swordfish. Another commenter stated that the preferred alternative would allow people who did not follow the regulations regarding permit renewal to obtain a new Atlantic tunas longline LAP, whereas some fishermen had to pay for the permit. In response, NMFS stated that the intent of the final rule is to help ensure that the number of available Atlantic tunas longline LAPs is sufficient to match the number of available swordfish and shark LAPs. Furthermore, all of the individuals affected by this rule either originally qualified for an Atlantic tunas longline LAP, or obtained it through transfer. NMFS will not be issuing new permits to everyone who submits an application. The Atlantic tunas longline permit remains a limited access permit. Unless a person is the most recent Atlantic tunas longline permit holder of record, the permit can only be obtained through transfer. Finally, NMFS received a comment stating that the preferred alternative provides an opportunity for individuals to sell their newly reissued Atlantic tunas longline LAP for their own economic benefit, possibly to south Florida vessel owners that want to fish with buoy gear. In response, NMFS believes it would be beneficial for achieving the domestic north Atlantic swordfish quota if some people who</p>
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	want to fish for swordfish are able to do so legally. Some of the transferred permits could be used to participate in the buoy gear fishery in south Florida. NMFS will continue to monitor the buoy gear fishery to determine if additional regulations are needed.
Overlap with other State or Federal Rules	This final rule does not duplicate, overlap, or conflict with any other Federal rules.
Changes in Technology, Economic Conditions, or Other Factors since Last Evaluation	There have been no significant changes impacting pelagic longline permit holders and dealer workshop attendance. In 2007, the number of Atlantic Tuna Longline Limited Access permit holders was 218. This number increased to 241 in 2008 and to 259 in 2009. That number has remained around 250 since then.
Recommendation to Continue, Rescind, or Amend and Rationale	This rule is continuing as currently amended to meet the objectives of the Magnuson-Stevens Act and the 2006 Consolidated HMS FMP. The changes to permit renewal requirements were successful in increasing the number of valid Atlantic tunas longline LAPs. Atlantic Shark Identification Workshops are also ongoing.
Name of Action, date, and FR Cite	Atlantic Highly Migratory Species; Atlantic Tuna Fisheries; Pelagic and Bottom Longline Fisheries; Gear Authorization and Turtle Control Devices. 0648–AV92 (73 FR 54721; September 23, 2008)
Current Status of Rule (Expired, Rescinded, Superseded, Amended, or Continuing)	Continuing
Description of Management Measures and Complexity	NMFS authorized green-stick gear for the harvest of Atlantic tunas, including bluefin tuna, and required a sea turtle control device in Atlantic HMS pelagic longline (PLL) and bottom longline fisheries. At that time, NMFS was not authorizing harpoon gear for the harvest of Atlantic tunas in the HMS Charter/Headboat category as originally proposed. The purpose of this final rule was to ensure fishermen harvest Atlantic tunas within quotas, size limits, or other established limitations and to distinguish greenstick fishing gear from current definitions of other authorized gear types. This final rule also addressed use of sea turtle control devices in the PLL and bottom longline fisheries to achieve and maintain low post-release mortality of sea turtles thus maintaining consistency with the 2004 Biological Opinion for the Atlantic PLL fishery and to increase safety at sea for fishermen when handling sea turtles caught or entangled in longline fishing gear. NMFS also revised its list of equipment models that NMFS had approved as meeting the minimum design specifications for the careful

	<p>release of sea turtles caught in hook and line fisheries. NMFS considers this rule to be low to moderately complex since it added a new authorized gear type, a new turtle control device, and revised a list of previously approved equipment for careful release of sea turtles.</p>
Economic Impacts of Management Measures and Nature of Public Comments	<p>Green-stick gear was defined and authorized for use in the commercial Atlantic tuna fishery for BAYS and bluefin tuna (BFT) by Atlantic Tunas General category vessels. Vessels fishing under the Atlantic Tunas General category will continue to be subject to all current HMS regulations for that category (such as bag and size limits). NMFS did not anticipate greatly increased landings from Atlantic Tunas General category vessels as a result of this rule because green-stick gear has been used in HMS fisheries since at least the mid-1990s.</p> <p>While NMFS did not anticipate greatly increased landings, this rule could result in a minor increase of overall effort deployed by this category of permit holders. This could occur if additional fishermen become aware of green-stick gear efficiency in catching Atlantic tunas and of the high quality of fish product that can be delivered to the dock as a result. Higher quality fish product often commands high ex-vessel prices, and thus could potentially improve the profitability of trips.</p> <p>The economic impacts were expected to be positive at the individual business level for those businesses choosing to use this gear type. Authorization of green-stick gear for harvest of Atlantic tunas would allow Atlantic Tunas General category permit holders additional opportunities for harvest. Tuna and other species harvested commercially with green-stick gear are usually high in quality and command higher prices due to the speed with which the fish are brought to the vessel, stored on ice, transported to the dock, and sold.</p> <p>Use of this gear may result in an unknown number of additional trips. The economic benefits may be minimal, however, as green-stick gear has been used in U.S. Atlantic tuna fisheries for several years and potential increases above existing levels of use as a result of this rule are expected to be minimal. Green-stick gear ranged in cost from \$1,300-\$3,300 for the fiberglass pole. Completely outfitting a vessel with hydraulic spool and other tackle to use the gear would cost between \$4,000 and \$6,000 depending on the size of the rig. Therefore, the total cost of outfitting a vessel to fish with green-stick gear would cost between \$5,300-9,300. Anecdotal information indicates that some fishermen may run mainlines from outriggers, a flying bridge, or a tuna tower, which would not be as costly. Outfitting costs are discretionary for fishermen as the gear is not required to participate in the fishery.</p> <p>This gear will be authorized for use from properly permitted vessels only. The cost of a Federal vessel permit in 2008 is \$28.00 per year. This rule</p>

	<p>also authorized green-stick gear for recreational harvest of Atlantic tunas when an HMS CHB permitted vessel is on a for-hire trip. Under this rule, HMS CHB vessels may sell Atlantic tunas whether the vessel is for-hire or not-for-hire. Additionally, NMFS received public comment that HMS CHB vessels desired to have the option of using green-stick gear on for-hire trips. Vessels fishing under the HMS CHB category will continue to be subject to all current HMS regulations for that category. This rule was expected to have positive economic impacts similar to those described above, but with the added economic benefits associated with authorizing the use of green-stick gear for recreational harvest of Atlantic tunas even when an HMS CHB permitted vessel is on a for-hire trip.</p> <p>Under this rule, green-stick gear was also authorized for use in the directed commercial Atlantic BAYS tuna fishery and allow for the incidental retention of BFT by Atlantic Tunas Longline category vessels. Green-stick gear can currently be used with more than two hooks by Atlantic Tunas Longline permitted vessels under current target catch and gear (i.e., circle hook) requirements.</p> <p>This rule distinguished green-stick gear from longline gear thus allowing green-stick gear to be fished in PLL and BLL closed areas if existing regulations for removal of PLL and BLL gear are met. These regulations state that a vessel is considered to have PLL gear onboard when it has onboard a power-operated longline hauler, a mainline, floats capable of supporting the mainline, and leaders (gangions) with hooks. Likewise, a vessel is considered to have BLL gear onboard when it has onboard a power-operated longline hauler, a mainline, weights and/or anchors capable of maintaining contact between the mainline and the ocean bottom, and leader (gangions) with hooks. For closed areas respective to both PLL and BLL gear, removal of any one of these elements constitutes removal of the PLL or BLL gear.</p> <p>Atlantic Tunas Longline permitted vessels will continue to be subject to current HMS PLL or BLL regulations, whichever is applicable, including the closed areas and circle hook requirements except that up to 20 J-hooks will be allowed onboard if green-stick gear is also onboard for use only with the green-stick gear. This provision to allow up to 20 J-hooks is intended to facilitate the high speed trolling methods used when fishing with green-stick gear. J-hooks possessed or used when green-stick gear is onboard may only be used with green-stick gear and may be no smaller than 1.5 inch (38.1 mm) when measured in a straight line over the longest distance from the eye to any other part of the hook.</p> <p>This rule was expected to have positive economic impacts particularly for fishermen holding Atlantic Tunas Longline permits who make use of greenstick gear. Public and HMS Advisory Panel member support was expressed for this provision. Authorization of green-stick for harvest of</p>
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	<p>Atlantic tunas allowed Atlantic Tunas Longline category permit holders additional opportunities for harvest. Economic benefits may have been realized through increased need for fish processing and the sale of additional fishing gear and supplies. Economic impacts may be positive in that further reduction in sea turtle mortalities achieved by enabling fishing gear removal may aid in continuation of the PLL fishery. Reducing the mortality of sea turtles in the PLL fishery reduces the likelihood that the performance targets for incidental take and mortality of sea turtles in the PLL fishery that were established in the 2004 BiOp are exceeded. Exceeding the performance targets in the 2004 BiOp could result in closure of the PLL fishery in the Gulf of Mexico and/or reinitiation of Section 7 consultation under the Endangered Species Act.</p> <p>It was unknown how many vessels followed the recommendation to possess and use sea turtle control devices. Production models of the turtle tether cost from \$200-\$250 and may be constructed according to the design specifications for \$40-\$70. Production models of the T&amp;G ninja sticks may be purchased for \$175 and may be constructed according to the design specifications for approximately \$25-\$85. Based on the number of Atlantic Tunas Longline, Shark Directed, or Shark Incidental permitted vessels as of November 2007, it was estimated that the cost of outfitting the longline fleet with one turtle control device would range from \$18,575, if all permit holders construct the least expensive device, to \$185,750, if all permit holders purchase the most expensive model produced.</p> <p>NMFS received several comments on the proposed rule and draft EA during the public comment period. A summary of these comments and the Agency's responses are included above. NMFS did not receive any comments specific to the Initial Regulatory Flexibility Analysis (IRFA). During the public comment period, NMFS received an economic comment that NMFS should not require a sea turtle control device in PLL and BLL fisheries because the shark fishing fleet cannot afford the device to meet the requirement. NMFS stated that it understands that there may be some negative economic impact from this requirement and has attempted to minimize these impacts by allowing the devices to be constructed with low cost materials. Construction costs for the sea turtle control devices range from \$25 to \$85 and may be constructed with materials that fishermen may already have on hand, thus reducing the construction cost. NMFS believes that the economic impacts to fishermen are not likely to be large with this final action. No changes were made to this final action as a result of this comment.</p>
Overlap with other State or Federal Rules	This final rule does not duplicate, overlap, or conflict with any other Federal rules.

Changes in Technology, Economic Conditions, or Other Factors since Last Evaluation	There have been no significant changes to green-stick gear technology or required sea turtle control devices since this rule was published. There does not appear to have been a significant increase in landings of fish and therefore economic conditions for individual businesses have not likely changed.
Recommendation to Continue, Rescind, or Amend and Rationale	This rule is continuing and needed to address the use of green-stick gear in the Atlantic tunas fishery and to address use of sea turtle control devices in the PLL and bottom longline fisheries to achieve and maintain low post-release mortality of sea turtles.

## Chapter 5 References

- American Sportfishing Association 2008. Sportfishing in America. Available at: <http://www.asafishing.org/images/statistics/resources/Sportfishing%20in%20America%20Rev.%207%2008.pdf>
- Ditton, R.B., D.K. Anderson, J.F. Thigpen III, B.L. Bohnsack, and S.G. Sutton. 2000. 1999 Pirates cove big game tournaments: participants' characteristics, participation in fishing, attitudes, expenditures, and economic impacts. Human Dimensions of Fisheries Laboratory Report #HD-615, Texas A & M University, College Station, TX. 126 pp.
- Ditton, R.B. and D.J. Clark. 1994. Characteristics, attitudes, catch-and-release behavior, and expenditures of billfish tournament anglers in Puerto Rico. Report prepared for The Billfish Foundation, Ft. Lauderdale, FL. 27pp.
- Ditton, R.B. and J.R. Stoll. 2003. Social and economic perspective on recreational billfish fisheries. Marine & Freshwater Research (54)4: 545-554.
- Holland, S. M., A. J. Fedler, and J. W. Milon. 1999. The operations and economics of the charter and head boat fleets of the Eastern Gulf of Mexico and South Atlantic Coasts. Memo NOAA Fisheries - F/SPO-38.
- Lovell, Sabrina, Scott Steinback, and James Hilger. 2013. The economic contribution of marine angler expenditures in the United States, 2011. U.S. Department of Commerce, NOAA Technical Memo. NMFS-F/SPO-134, 188 p.
- Minnesota IMPLAN Group, Inc. 2010. IMPLAN professional: social accounting and impact analysis software. Minnesota IMPLAN Group, Inc., Minneapolis.
- NMFS Office of Science and Technology foreign trade statistics website: [http://www.st.nmfs.noaa.gov/st1/trade/cumulative\\_data/TradeDataProduct.html](http://www.st.nmfs.noaa.gov/st1/trade/cumulative_data/TradeDataProduct.html)
- NMFS. 2013a. Annual report of the United States to ICCAT. USDOC, National Marine Fisheries Service. ANN/045/2013.

- NMFS. 2013b. Fisheries of the United States: 2012. Alan Lowther, Editor. Office of Science and Technology, Fisheries Statistics and Economics Division, NOAA, U.S. Department of Commerce, Silver Spring, MD.
- NMFS. 2012a. Annual report of the United States to ICCAT. USDOC, National Marine Fisheries Service. ANN/045/2012.
- NMFS. 2012b. Fisheries of the United States: 2011. Alan Lowther, Editor. Office of Science and Technology, Fisheries Statistics and Economics Division, NOAA, U.S. Department of Commerce, Silver Spring, MD. 124 p.
- NMFS. 2010a. U.S National Report to ICCAT, 2009. NMFS Office of Sustainable Fisheries, Silver Spring, MD. ANN/045/2009.
- NMFS. 2010b. Fisheries of the United States: 2010. E.S. Pritchard, Editor. Office of Science and Technology, Fisheries Statistics and Economics Division, NOAA, U.S. Department of Commerce, Silver Spring, MD.
- NMFS. 2010c. Stock Assessment and Fishery Evaluation (SAFE) Report for Atlantic Highly Migratory Species, 2009. NMFS Office of Sustainable Fisheries, Silver Spring, MD. 234 p.
- Pritchard, E.S. 2009. Fisheries of the United States, 2008. NMFS. Office of Science and Technology. Silver Spring, MD.
- Rose, D. 1996. An overview of world trade in sharks. TRAFFIC International. 105 p.
- Sutton, S.G., R.B. Ditton, J.R. Stoll, and J.W. Milon. 1999. A cross-sectional study and longitudinal perspective on the social and economic characteristics of the charter and party boat fishing industry of Alabama, Mississippi, Louisiana, and Texas. Report prepared for the National Marine Fisheries Service with MARFIN funding support (Grant Number NA 77FF0551.) Human Dimensions of Fisheries Research Laboratory Report #HD-612. Texas A&M University, College Station. 198p.
- Thailing, C.E., R.B. Ditton, D.K. Anderson, T.J. Murray, J.E. Kirkley, J. Lucy. 2001. The 2000 Virginia Beach red, white, and blue fishing tournament: participants' characteristics, attitudes, expenditures, and economic impacts. VIMS, College of William and Mary, Virginia Marine Resources Report No. 2001-9, VSG-01-88, Texas A & M University, College Station, TX. 110pp.
- U.S. Fish and Wildlife Service and U.S. Department of Commerce Census Bureau. 2011. National survey of fishing, hunting, and wildlife-associated recreation.
- U.S. Fish and Wildlife Service and U.S. Department of Commerce U.S. Census Bureau. 2011 national survey of fishing, hunting, and wildlife-associated recreation. FHW/-6-NAT.